The Builder.

VOL. XIII.—No. 647.

THE addition of a vast collection of works of contemporary fine art to the great display of those of industry, is the one redeeming feature which will serve to stamp the Parisian Exhibition of 1855 with a character of its own, and a lasting place in the records of intellectual development. No man interested in the position which the nineteenth century will some day hold in the history of the world should fail to visit this great cosmorama, in which he will find mapped out for his study all the leading landmarks of contemporary civilization. In the majority of the subjects represented, he will trace the affinities which link us to the past, while in many a daring conception, ably realized, he will read the moral of the passing moment. The sum of such indications, if we take pains to interpret them rightly, furnishes the formula of immediate if not of ultimate progress. As a whole, the Fine Art Exhibition is infinitely suggestive; so much so, indeed, that the critic is almost bewildered by the various claims upon his notice which its innumerable details enforce. Fortunately, a recollection of the more special scope of our journal dictates the points of view from which its readers will most probably desire that the subject should be approached on the present occasion. While, therefore, we shall hope to individualize a little in speaking of the architectural contributions, we shall restrict ourselves to generalities in dealing with those of painting and sculpture.

The building which France has provided for the reception of 5,112 works of art, contributed by 2,054 artists, representing no less than 28 different nationalities, is admirably adapted for its purpose. The light is everywhere excellent; and, although the whole of the construction is of a very temporary character, there is no external evidence of shabbiness or carelessness of design. The façade is agreeable, and the tint which has been selected for the interior, a dark sage green, is well adapted to bring out the colour of the pictures, while it is of so negative a character as to retire from the eye, and in no wise to draw attention to the architectural forms, which have been kept as simple as possible. Commencing with painting, we have to remark, that the general relative numerical proportions which have obtained between the works of the different nations are as follows;—Austria, 52; Nassau and Baden, 14; Bavaria, 65; Belgium, 224; Denmark, 5; Sicily, 5; Spain, 84; the Pontifical States, 13; the United States, 39; Great Britain, 376; the Grand Duchy of Hesse, 4; Mexico, 1; Holland, 98; Java, 1; Peru, 5; Portugal, 23; Prussia, 137; Sardinia, 26; Saxony, 12; Sweden, 28; Norway, 16; Switzerland, 94; Tuscany, 6; Turkey, 1; the Hanse Towns, 18; Wurtemburg, 9; France, 2,060, that is to say, nearly twice as many as all the other nations put together. To her, therefore, we give precedence, since not only her extent demands it, but her merits justify it.

Deprived by some of those foolish *caprices d'artiste*, which, if annoying at the opera, are intolerable in the atelier, of the valuable co-operation of MM. Ary Scheffer and Paul De la Roche, France has fallen back upon MM. Ingres and Horace Vernet for *chefs d'orchestre*. With the exhibition of the first of these two gentlemen, each of whom is allotted a gallery to himself, all who love refined drawing and sentiment must be eminently gratified. As one of the favourite pupils of David, M. Ingres forms the principal surviving link between the old and new French schools, and his series of works, which spread over almost the whole of his long and laborious life, evidence the minute shades of progress by which the transition has been effected. His portrait of himself painted in 1804, shows how early he acquired perfect mastery over the difficulties of his art, and his "Vierge à l'Hostie," painted exactly fifty years afterwards, evidences how gently time has laid its hand upon his. The most popular work of the series, and that probably which best exhibits the taste and sweetness of the painter, is his well-known Venus Anadyomene. M. Horace Vernet maintains in all his works his invariable characteristics of power, and "*Luca fa presto*" brilliancy of execution. After the two field-marshals crowd swarms of generals of division, some commanding the "heavies," in the shape of history and epic landscape, and others the lighter troops of *genre*, and *paysage* under its more playful aspects. Gudin, Biard, and Isabey head the marines; while Alexandre Decamps manœuvres with a select company of Bashi Bazouks and miscellaneous Orientals of his own. Couture's masterpiece, "The Decline of the Roman Empire," and Muller's "Entry of the Emperor to Paris in 1814," and "Summons of the last Victims of the Reign of Terror," stand out amid the whole collection as the grandest historical pictures of the age, next after Kaulbach's series at Berlin. In every other department of pictorial art, the English school maintains, to say the least, an equal footing with the French; but in the very highest class of composition, the severe academic training to which the leading artists are subjected in their youth tells with a force upon their manhood that our more desultory education in art cannot rival. In the extreme of littleness, as in the extreme of greatness, the French are most excellent, since Meissonnier and Plassan are almost as unrivalled as Couture and Muller. Between these two poles lies a tract of country the leading features of which it would take pages, not lines, to indicate: it may suffice to commend especially to the student's notice the landscape and cattle pieces of Rosa Bonheur and Troyon; the colour and effect of Diaz; the historical compositions of Eugene Delacroix, Leon Cogniet, Abel de Pujol, Flandrin (whose exhibition does not do his great talents justice), and Henri Lehmann; the landscapes of Cicori, Huet, Le Poitevin, &c.; and the *genre* pictures of Hebert, Glaize, Hamon, Eugene Lami, &c. Neither by any means let him omit, as he values fair faces, to look at Winterhalter's large group of the Empress and her Ladies of Honour.

Next in importance to the French comes our own school of art; and it is a matter for just pride to us all that it should come out of this peaceful tournament not only unscathed but with fairly-earned laurels. It is not necessary here to dwell on the well-known merits and peculiarities of our popular painters: upon the French press, however, they have fallen as a nine days' wonder. In spite of the denunciations of Mr. Ruskin, the world delights in the English school, and most especially in the works of its Academic representatives. The French artists generally acknowledge the genius of Millais and of Hunt, and regret that it should be doomed to shine through clouds of quaintness and mannerism. Their admiration for Mulready, Landseer, Leslie, Dyce, Roberts, Creswick, Linnell, Lewis, and Haghe, are unbounded.

Germany has by no means added to her reputation by her exhibition: the interval is so great between the ambition of her artists and their powers of performance, that we are tempted to regret that they should aim so high to fall so short. Cornelius is divine in thought, but full of exaggeration and hardness of style. Kaulbach is certainly a noble draughtsman, filled with happy inspirations, and unrivalled at a cartoon, but with a brush his manner is laborious: his manner of painting is opaque, and the highest dignity or energy of expression fails to animate his forms of leathery flesh. The two, however, with all their faults, stand among their contemporaries as giants; and, by dignity and moral elevation, such truly epic works as Cornelius's series of cartoons for the Campo Santo, at Berlin, and Kaulbach's, for the museum at the same place, throw all surrounding studies into the shade. It is principally owing to the evidence of labour shown by extreme artificiality of composition, and to an elaboration of painting which extinguishes vigour of handling and purity of tint and texture, that even good and well-educated artists, such as Hübner, Mücke, and Führich, fail to produce the powerful impressions on the mind at which they aim. It is but just to Prussia to remark that she is far ahead of both Bavaria and Austria. The latter falls below par altogether.

Belgium is unquestionably the most rising school of the day; and, in pleasing *genre* pictures, she exhibits a very high order of excellence. A more graceful specimen of this class than Willem's "Interior of a Silk-shop in 1660," we have rarely met with. Van Schendal's clever artificial light effects, and Verboeckhoven's cattle, are well known and generally esteemed in this country. Madou's picture of some young gallants disturbing a country *fête* is full of talent; and Dyckmans, Stevens, Bossuet, Portaels, and Leys, contribute works of much merit. The tendency against which this school has to be most upon its guard is that of over-finish, degenerating into teaboardism. Holland is perhaps in greater danger from the same temptation than Belgium. Many of the pictures exhibited by the modern Dutch masters are almost worthy of the old, and that must be looked on as no mean praise. Spain sends a considerable number of paintings, some of which are interesting, from the scenes and episodes of national manners represented; few rising above mediocrity. The portraits of Madrazo are to be distinguished for vigour of treatment and life-like execution. From Portugal much was not to have been expected; but of America we certainly had hopes, destined, however, to be grievously disappointed. Healy and Rossiter have a reputation in America, but they are neither of them likely to obtain much upon this side of the water.

In sculpture there is not very much that is novel: the boldest attempt is a colossal work by Kiss, of Berlin, representing St. George and the Dragon. There are points of great merit in it, though it by no means rises to the beauty of the Amazon. It is to be regretted that the cast has not been bronzed, as, both the composition and manner of modelling being adapted for that material, the general effect of the whole is much impaired by its being seen in its plastery whiteness. There are, for instance, many details, such as the veins on the horse's neck, the scales of the dragon's skin, certain parts of the armour, &c. which have been exaggerated, in order to keep their place in the dark-coloured material, and which are so defined by the bright lights and shades of the white material, as to interfere with the expression of the whole, which, to be effective, required concentration and repose. At present, these details fret the eye, and scarcely allow a correct judgment on the group to be formed. Most of the works exhibited, and almost all the best, being included in the Sydenham collection, we need not dwell upon the Paris series: suffice it to say that no very shining light has manifested itself, and that both have reason to regret the apathy of Tenerani, who appears resolved to allow his light to shine only for those who pay him. It certainly seems a pity that the works of an

artist who, by his genius and studies in the atelier of Canova, is identified with Thorwaldsen, Rauch, and Gibson, should be so little known out of his own country.

In architecture, on the whole, we regret to say, the display is inadequate to the present position of the art. Although the French exhibit no less than 183 series of drawings, the whole, with two or three exceptions, may be divided into studies of existing monuments and designs for restorations. The Institute of France contributes a selection of the admirable studies made of ancient remains by the gold medal students in Italy and Greece; and the archives of the "Monumens Historiques" furnish a corresponding and much more extensive collection of studies of national archæology, representing the monuments of the country, not only as they exist but as they may be supposed to have existed in the days of their completeness and perfection. Each of these is certainly highly important, but neither can be accepted as an adequate illustration of the present state of architecture in France. Prussia is represented by a pupil of M. Didron's, who sends a design for an altar;—Denmark, the Roman States, America, Portugal, Norway, Switzerland, Wurtemberg, and the Hanse Towns, are not at all. Bavaria contributes only some sketches of houses by Professor Lange; Austria a few poor designs by Professors Vantini and Grueber, of Prague. Belgium musters but one second-rate architect to all her painters: Holland sends but three designs, none of which have been executed; and Spain forwards drawings only of ancient monuments. Great Britain alone vindicates the actual position of her national architecture: she alone takes cognizance of the existence of iron as a building material, and it is only from the details she furnishes of executed works that any idea can be formed of the nature of the wants and tastes to which it is the duty and province of architecture to minister in the nineteenth century. Nor is it alone the utilitarian side of the profession to which her illustrations tend, for all its varied and most recent aspects are taken cognizance of. In the Houses of Parliament and the Crystal Palace, represented, as to its construction, by Sir Joseph Paxton, and, as to its art, by Mr. Digby Wyatt, we have the most important recent works. In the Catholic Apostolic Church, by Messrs. Brandon and Ritchie; the church of St. Nicholas and the new Town-hall, Hamburg, by Mr. Scott; Peckforton Castle, by Mr. Salvin; St. Aidan's College, Birkenhead, by Mr. Thomas Wyatt; St. Stephen's Church, Westminster, by Mr. Ferrey, we have the happiest illustrations of the application of mediæval art to modern civil and ecclesiastical uses, so far as it has gone. Wilton Church shows how legitimately novelty may be derived from little practised styles; while the late Mr. Carpenter's, Mr. Scott's, Mr. Salvin's, and Mr. Clutton's drawings show how judiciously we often effect our restorations of the past. Mr. Bunning, Mr. Lockyer, Mr. Hardwick, Mr. Gibson, Mr. I'Anson, and Mr. Fowler illustrate the application of art to the requirements and adornment of the business part of the metropolis. Mr. Falkener and Professor Donaldson show that in all our practical labours we are not unmindful of the lessons to be derived from the severest study of the antique. Mr. Penrose's drawing of Lincoln Cathedral, Mr. Allom's designs for river-terraces, Professor Cockerell's noble visions, Mr. D. Wyatt's studies at Rome and Subiaco, and Mr. Owen Jones's masterly views in the Alhambra, show that there are artists in the profession, in the most practical sense of the term.

France, we must repeat, has not done herself justice in her Exhibition, and has missed an opportunity which may never again occur. We look in vain for any indication of the nature of those great works which have drawn upon Paris the eyes of all Europe: we recognise not a spark of that fervid imagination which has created an eclectic style of street architecture almost original. If French architects were to be judged of by the present exhibition alone, they would be set down as pedants, whose studies were equally laborious and barren. This is so absolutely contrary to fact, that however much we may be constrained to admire the learned and beautiful drawings shown, we cannot but protest altogether against accepting them as a fitting architectural exhibition for her. The archæological and classical knowledge, as well as the artistic power, of MM. Viollet le Duc, Duban, Paccard, Caristie, Duc, Labrouste, Lefuel, Normand, Vaudoyer, poor Tetaz, Daly, Thomas, Lassus (with M. Hittorf, the flower of the architectural ability of France), are well vindicated, but not one of them exhibits an indication of ever having executed an original work in all their days. M. Duban, for instance, contributes drawings executed many a long year ago, showing admirable taste; and if we are to accept this exhibition as an exposition of the contemporary architecture of France, his country has never benefited by such abilities; and so far as practical matters are concerned, his name has been written in water. The jury will be placed in a position of exceeding difficulty, for they will either have to ignore the ablest men of the present day, or they will have to give their best medals for antiquarian studies, treating with extreme unfairness those who have contributed elaborate drawings of original works designed and executed by themselves. In fact, they will have at starting to choose between rewarding drawings or rewarding designs. The only exceptions among the French contributions to the studies and restorations are the drawings of a Byzantine Church, by M. Questel; a fountain, by M. Driollet; and some buildings for the Zoological Society of London, by M. Perrot. The first of these, the Church of St. Paul, at Nismes, is a fine building which was begun in 1838, and completed in 1849. It has been admirably decorated in colour, under the architect, by M. Flandrin, the painter of the Grand Procession in St. Vincent de Paul, and by M. Denuelle, who exhibits a number of beautiful studies made during his period of study in Italy. The second is agreeable and well drawn, and the third is of but little importance. These three subjects, with some studies on lunatic asylums, by M. Philippon, and on dwellings for the labouring classes, by M. Gourlier, are all that exhibit the practical tendency of the grand apparatus of study so abundantly set forth.

It is well for the architects of Paris that the city itself, with its noble monuments, so admirably supplies visitors with means of estimating the present highly advanced state of practical architecture in France, for they might certainly look in vain for any indications of it in the Palais des Beaux Arts.

CRYPT AT MERCHANT-TAILORS' HALL, THREADNEEDLE-STREET.

NOTWITHSTANDING the demolition of the remains of Old London by fires, improvements, and other causes, there still lie below the present surface many interesting vestiges, concealed in coal-cellars and other dark labyrinths unknown in many instances even to those who are living immediately in the neighbourhood of them, and it is in many cases only when the light of day has been thrown into such places, when making alterations, that these matters are brought under the public notice. Notwithstanding the endeavours of a few, many objects of interest have been removed and destroyed without any record at all. This is to be regretted, and its recurrence for the future might easily be remedied. The Corporation should depute some qualified person to watch over and preserve such objects of antiquity as may from time to time be discovered; and these ought without delay to be removed to some place appointed for the reception of such fragments as are portable, and of sufficient interest.

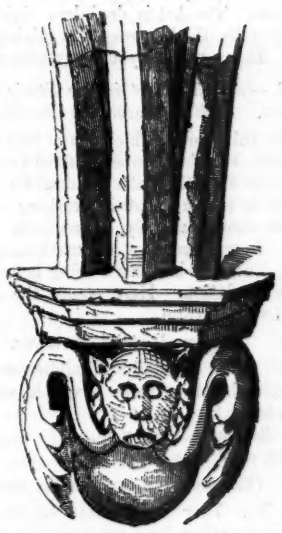
In the present instance we lay before our readers engravings of the remains of one of the halls of an ancient and honourable City Company which has numbered amongst its members Edward III. Richard II. Anne, his queen, Henry IV. Henry V. Henry VI. Edward IV. Richard III. and Henry VII. Charles I. was also a brother of the craft; so was James II. Since this reign none of the kings or queens of England have been free of this Company, but a host of personages eminent for rank and talent have been admitted as members. Amongst these not the least worthy were honest John Stow and Speed, the chroniclers, both tailors by trade. Prince Albert is amongst those recently admitted to the Merchant Tailors' Company.

In glancing over the above list of royal persons, we fancy pictures of many a rare feast composed of "capons of hie grece," "fesaunts," "herons and bitrons," "breves," "frysh and salte venison," and other vives, the table thronged with the varied costumes of the times, the background formed of the fitting architecture of the old hall. In this hall, in addition to the admission feasts of the above kings, July the 16th, 1607 (the day of election of master and wardens of the Merchant Tailors' Company), was kept with great solemnity and feasting. King James I. with Prince Henry, and divers honourable personages, dined at Merchant Tailors'-hall, and were entertained with great variety of music, vocal and instrumental, and speeches. The king dined in the chamber called the king's chamber. Then the master of the company, John Swinnerton, attended, with the four wardens and other eminent aldermen and citizens, and after a speech gratulatory made to the king by Sir Henry Montague, recorder, presented him with a purse of gold, and Richard Langly, clerk of the company, delivered unto his Majesty a roll, wherein were entered the names of such kings and nobles, and other great personages, as had been free of their company, viz.,—seven kings, one queen, seventeen princes and dukes, two duchesses, one archbishop, thirty-one earls, five countesses, one viscount, twenty-four bishops, sixty-two barons and lords, two ladies, seven abbots, seven priors, and one sub-prior, omitting a number of knights and esquires.

The king then said, that he was free of another company, yet he would so much grace the Company of Merchant Tailors, that his eldest son the prince should be free thereof; and that he would see and be a witness when the garland should be put upon his head; and then they resorted unto the prince, who dined in the great hall; and the Company presented him with *another purse of gold;* and the clerk delivered his roll. And his highness said, that not only would he be free of the Company, but many other of his lords; and commanded one of his gentlemen and the clerk of the company, to go to the lords present, and to require of them that loved him, and were not free of other Companies, to be free of this Company; and so were accordingly made free twenty-two earls and lords, and a great many clergymen, knights, and esquires.

At the time of this feast, Threadneedle-street must have presented a picturesque appearance, contrasting strangely with the present bustling thoroughfare. One would like to see an engraving of the Merchant Tailors'-hall before the time of the Great Fire, thrown into relief by the carved gables, projecting signs, and the other characteristics of ancient London. Respecting the old hall Stowe says, "Some distance from St. Martin Outwich Church is the Merchant Taylors' Hall, appertaining to the guild and fraternity of St. John, Baptist, time out of mind called of Taylors and Linnen Armourers of London; for King Edward I. in the twenty-eighth of his reign, confirmed this guild by the name of the Taylors and Linnen Armourers, and also gave to the brethren thereof authority every year at Midsummer to hold a feast, and to choose a governor and master, with wardens. When, upon the same year 1300, on the feast-day of the nativity of St. John, Baptist,

CRYPT, MERCHANT TAILORS' HALL, LONDON.



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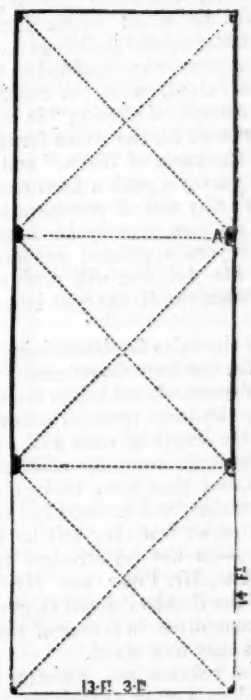

PLAN.

they chose Henry de Ryall to be their pilgrim; for the master of this mystery (as one that travelled for the whole Company) was then so called, until the 11th year of Richard II. and the four wardens were then called purveyors of alms (now called quarterage) of the said fraternity."

This Merchant Taylors'-hall, some time pertaining to a worshipful gentleman, called Edmund Crepin (Dominus Crepin, after some record), he, in the year of Christ 1331* (the 6th of Edward III.), for a certain sum of money to him paid, made his grant thereof by the name of his principal messuage, in the wards of Cornhill and Broad-street (which Sir Olivar Ingham, knight, did then hold), to John Yakesly, the king's pavilion-maker. This is called the *New-hall*, or Taylor's Inn, for a difference from their old hall, which was near the Red Lion in Basing-lane.

The list of donors to the Merchant Tailors' Company is very lengthy: amongst them we may, however, mention the name of Thomas Sutton, citizen and tailor, of London, who by his will dated May 25th, 1432, gave to the Company a certain lane called "Gressynghamlane, as they lie in length from Thames-street to the Thames, to have to the Masters of the Fraternity and Custodes of the same, and to their successors for ever, to relieve and maintain the poor brothers and sisters of the same Fraternity, to pray devoutly for his soule *in perpetuum*."

He also gave to the same Company all his lands and tenements in the parish of Trinity-the-Less, and a lane called Trinity-lane.

The old hall was partly destroyed by the Great Fire of 1666, and a new structure erected, the entrance to which was by a richly carved and otherwise ornamental doorway. This was removed a few years since, and within a short time the hall has put on a new face, corresponding with the style of recent improvements.

The hall erected after the fire is of large size and noble proportions, enriched with stained glass and paintings. The present roof of plain planking is, however, a sad eye-sore. Formerly the roof was composed of a panelled ceiling, part of which, not long ago, ten days before the time appointed for an important feast, fell down —fortunately in the night—with a tremendous crash. Workmen were immediately set to work to remove the whole of the plastering, and within the ten days the present ceiling was fixed. It is a pity that such haste was necessary: the effect is beggarly: it might, however, be improved by the judicious application of colour.

The kitchen, at which we take a peep on the way to the crypt, may be older than the time of the fire, probably about the time of Henry VIII. On a conspicuous part of the wall is the excellent motto—"WASTE NOT, WANT NOT." There are some pointed arches and windows, and also two corbels, visible. The crypt is at a considerable depth below the kitchen, and has been used for some time past as a coal-cellar: the walls and filling in between the groins are of chalk; the proportions may be judged of by the engravings.

Some alterations are being made on the premises of the Company, under the direction of Mr. Hardwick; and it was during the execution of these, that the crypt was brought into notice. We are glad to hear that the Company have determined on preserving it.

About 7 feet from this crypt, and under the late open yard of the hall, another old vault has been recently discovered: it is 7 feet wide, and quite full of garden mould. The walls are of chalk-rubble, and the voussoirs of Kentish rag.

Let us note in conclusion, that the Merchant Tailors' Company have always shown a consideration for literary men, and have done much for general education.

* This is about the date of the crypt engraved.

THE NEW CHURCH AT ISLEWORTH. — The first stone of this new edifice was laid on Monday last.

THE METROPOLITAN BUILDINGS BILL.

WE have now before us the Metropolitan Buildings Bill, "as amended by the Select Committee;" but whether or not it will be carried through this session, appears still doubtful. Comparing it with the Bill originally brought in by Sir William Molesworth, it will be seen that it has undergone so many changes as to be no longer the same measure. As we have already said, it is in most respects very greatly improved: many of the objections that we pointed out have been remedied: some of them at the last moment, as for example, the dangerous exemption from control of detached buildings. The exemption of greenhouses ought not to remain unlimited, especially if they are not detached: it should be stipulated that no part of the enclosure should be of wood excepting the doors and sashes, and that the chimney, shaft, &c. should be in accordance with the directions of the Act. Clause IX. which excepts from the operation of the Act works done for the purpose "of necessary repair," would lead to differences of opinion, and so, for the sake of all, should be more clearly defined. As it now stands defective walls might be taken out and rebuilt, or tampered with without supervision. The exception of "necessary repairs" should apply only to woodwork, plastering, or other superficial covering. By Clause XXV. it is required that "the eaves or cornices to any overhanging roof" shall "be of brick, tile, stone, slate, cement, or other fire-proof material." This will put an obstacle in the way of the most natural and proper mode of roofing, and ought not to be insisted on. It is true the clause says, "unless the Metropolitan Board (the Board *to be* appointed under Sir Benjamin Hall's Bill for the better local management of the Metropolis) otherwise permit;" but it would surely be much better legislation to settle the matter by the Buildings Act itself.

Very great powers are confided to this Board, even to the extent, with the consent of her Majesty in council, of altering "in such manner as they may think fit, the Rules for the Regulation of the Thickness of Walls;" and to give to any district surveyor such a fixed salary as they may determine by way of remuneration, instead of fees. This can scarcely be deemed justice to the surveyors appointed *previously* to the passing of the Act, and will doubtless be reconsidered when the House goes into committee on the Bill.

Touching the rules for determining the thickness of walls, the formulæ originally prescribed have been abandoned, and tables are substituted showing the thickness required according to the height and the length of each wall. The rules have an advantage over the schedules of the present Act, but they seem to involve various strange anomalies, and are modified by so many provisions that we fear they will be found very troublesome,—to use no stronger term. Mr. Thomas Cubitt, Mr. Piper, and Mr. Wales (as secretary of the Builders' Society), gave evidence before the committee in favour of the proposed schedules as they now stand.

The official referees and registrar are to be compensated, as a matter of course, for the loss they will sustain; and we are glad to observe that the appeal we inserted in favour of the clerks and others employed in the Office of Metropolitan Buildings has not been made without effect.

MR. EDITOR,—A comedy in real life is proposed to be performed in 1856, by H. M.'s servants, the district surveyors, if the order of her Majesty and both Houses of Parliament can be obtained. It is to be in one (the Metropolitan Buildings) Act: will you kindly insert three of the scenes, and oblige a

DISTRICT SURVEYOR.

N.B. The author of the Act is not one of the performers.

Scene 1.—*The District Surveyor's Office.*

[The District Surveyor discovered alone at his desk, in a despairing mood over the schedule.]

D. S. (concluding his meditations). Well! I suppose my duty is to try to induce the public to think this schedule a model of perfection. Such, then, shall be my endeavour.

Enter a Builder of small Houses.

Builder. I want to build a small two-story house, and to ask you whether I understand aright Schedule 1, part 2, rule 2; horizontal column 9; vertical column, 2. I intend to build my party-walls 8½ inches thick, as they will be only 23 feet high, and 26 feet long.

D. S. The Act will not allow it.

B. Why? *There* is the rule.

D. S. So it *is*, but it cannot be used because of Rule 6.

B. Then why is it in the Act?

D. S. I suspect it was put there as an architectural ornament, because the table would not have looked so well without it. I believe, too, it has been endeavoured to make the schedule ornamental, to compensate for the Act restricting very much the external decoration of the buildings themselves.

B. But I am a practical man, and want a practical Act. Is there no remedy?

D. S. Yes. The Legislature in its wisdom, foreseeing that difficulties would occur, specially provided by the 52nd section for the repeal of the schedule and enactment of another without the interference of Parliament. You had better, therefore, apply to the Board of Works.

[*Exit Builder towards Whitehall.*

Scene 2.—*A large Dwelling-house in course of Erection.*

Enter Mr. P. (*an eminent Contractor*), *and the District Surveyor.*

P. What is this notice which you have given me, as to my building being wrong? You say the walls of this story are not thick enough, and that I must either raise the story to a height of 25 feet, or lower it to 18 feet, and then my 13-inch walls will do; but that they will not do for the story 20 feet high as at present. This is against common sense (indignantly).

D. S. The Act requires it. Schedule 1, part 2, rules 5 and 9.

P. Then the Act is against common sense?

D. S. Oh, no! that cannot be; and besides you spoke in favour of this schedule last June, at the Institute of Architects.

P. So I did. But can you reconcile the rules with common sense?

D. S. Not with common sense. But setting that aside, cannot you perceive some analogy between the Act and a Quadratic Equation, the solution of which you know always gives two results?

P. I see. The Act is doubtless right. So I will make my walls thick enough by raising them 5 feet higher. Thank you for your courteous explanation.

Scene 3.—*An Architect in his Study, designing a House. Soliloquy over the Buildings Act.*

A. The rules for the thickness of walls of dwelling-houses were calculated so as to make them about one-fifth *thinner* than the walls required for public buildings. It is curious that in working out the rules, the walls should actually be required to be much thicker. I suppose that in mathematics there is always a difference between a thing before involution, and after evolution. Here comes the District Surveyor; I will ask him.

Enter District Surveyor.

A. Mr. D. S. If I build a building strong enough for a public building, may I use it as an ordinary dwelling-house?

D. S. Reason would say so.

A. But what says the Act?

(The architect explains his case.)

D. S. No. Your walls must be thicker for the dwelling-house than for a public building.

A. Then the Act is contrary to reason.

D. S. (At first at a non-plus, but recovered by a happy thought) Oh, no! On the banks of the Cam they have two kinds of reasoning, one of which is called the "reductio ad absurdum," and was adopted in the case of the Buildings Act, which is highly scientific. Good bye.

[*Exit in haste to avoid further inquiries.*

PROTECTION OF IRON FROM OXIDATION.—Mons. Paris, it is said, has discovered a vitreous enamel, which will stand the test of any chemical or physical action to which it may be subjected. Experiments, it is added, fully prove that the adherence is perfect, and that the enamel resists the most violent shocks without cracking, although the iron it covers may be completely bent; and it does not peel off or take fire by the action of heat; while concentrated acids can be kept at the boiling point for a considerable period in vessels protected by it. Iron may thus be used where glass, silver, gold, or platina only has heretofore been employed. It is also proposed to apply the invention to the lining of water and gas-pipes, covering roofs, and sheathing ships, anchors, &c.

INCISED SLABS AND PAVEMENTS,

WITH A VIEW TO THE USE OF THEM.

IT is a matter surely to be regretted, that the artists of the Middle Ages, generally so profuse in their legacies to posterity, should have been so parsimonious with regard to those historiated pavements of incised stones which formed by no means the least valuable ornaments in some of the largest cathedrals, and by which the forcible outlines of the Egyptian hieroglyphics and the Etruscan vases are brought back to our recollection.

A few scattered, half-defaced slabs, long removed from their original position, with one or two scanty notices of the Benedictines, serve rather to suggest what we have lost, than to afford us many data for any reconstruction.

It is probable, however, that even in the thirteenth century the extreme amount of cost and labour demanded for the production of incised stones prevented their frequent employment in large masses, such as pavements; although as tombs, consisting of single slabs, they are sufficiently common all over Europe.

Dante gives a curious proof of this: describing the examples of the punishment of pride incised on the marble floor of the first circle of the hill of Purgatory, he compares them to the slabs on the floors of the churches, which exhibit the image of the person such as he was when alive, by which it would appear that figure-subjects were in his time for the most part employed for monumental purposes. For had such a mode of treatment been common in the pavements of the churches of Florence, or of his own "bel San Giovanni," he would doubtless have referred to them.

The marble plan of Rome, now in the Capitoline Museum, which anciently formed the floor of the temple of Remus; and an obscure allusion by Pliny to the pavimentum scalpturatum, which he described as ornamenting the temple of the Capitoline Jove, as far back as the third Punic war, show that the origin of these pavements is to be sought at a time far anterior to the period of their greatest prevalence.

As regards the Middle Ages, we must refer the gradual employment of incised slabs to the increased difficulty of procuring the costly and exotic materials for the pavements of the Opus Alexandrinum and Opus Vermiculatum, which were so common in ancient art. Accordingly, we find incised stones first of all used in conjunction *with* mosaic, as in the tomb of William, son of Robert, the second count of Flanders, who died in 1109, a few years back discovered in the ruins of the church of St. Bertin, at St. Omer. This tomb was no other than a pavement of mixed mosaic: the principal feature was a cross saltire, the circles at the extremities of which contained stones with incised lions, the lines being filled up with a coarse cement; and if I remember rightly, an imitation in incised stone and mortar was in some cases substituted for the coarser mosaic. If we may believe the authors of the "Voyage Littéraire," the cathedral of Arras possessed in the choir a pavement of historiated stone, still more ancient than this example; but unfortunately the judgment of the Benedictines was so often wrong when they attempted to assign a date to objects of the Middle Ages, that it may well be permitted to doubt whether those "great hard stones on which the history of genius was represented in relief" were really constructed when the bishopric of Arras was separated from that of Cambray, viz. in 1095. In all probability they resembled those at St. Omer, and the deterioration of the cement would easily explain how they came to present the appearance of being in relief, especially when the edges became worn down.

We now come to the pavement belonging to the ancient cathedral of St. Omer. Although repeatedly taken up and removed from place to place, and still worse, injudiciously restored, it remains by far the most important example we possess, not only with regard to the quantity of the stones, but also to the importance of the subjects represented.

The choir, the chapels, and probably a portion of the ambulatory were paved with these dalles, the execution of which appears to have

extended from the end of the twelfth century to the latter half of the thirteenth. In 1608, the soil of all the east end of the church was raised, and they were then conveyed to the nave, where, being exposed to much rougher usage than in the choir, they rapidly decayed, until at last, after very many removes, the few, comparatively speaking, which have been left have found an asylum in the Chapelle des Antiquaires. Unfortunately it was decided that they should be restored before being finally deposited in safety, and accordingly a hot cement was run into all the hollows utterly irrespective of the ancient colours, while a few strokes of the chisel gave the requisite sharpness to any part that had become obliterated. After this it is needless to say, that the drawings are but shadows of what the originals must have been; indeed, it is probable that not a single line retains its ancient shape, not only on account of the restoration, for that was only partial, but from the fact that the ancient workman sometimes under-cut his incisions, or did not make them all of equal depth. Now, when these incisions came to be worn down, they would present a very different appearance from what they did when they were first executed.

The Italian work, on the contrary, is far better preserved, for the marble being a harder material, the lines were formed in the first instance by means of drill holes, and as they went in much deeper than the chisel, we can often ascertain the direction of the lines when they themselves have been utterly obliterated.

The slabs at St. Omer consist of three sizes, the sides of which bear the proportion, 1, 3, 5. The larger ones consist principally of portraits of the donors on horseback: these were varied by others containing nine figures of men or animals, in as many circles. Others, again, have interlacing foliage or shields. There are also some fragments of slabs much larger than any of these: they probably served as centres for the pavements of the chapels. One represents the burial of the Virgin, and the other is defaced.

Of the second size, the subjects are still more varied:—Armed elephants, the seven liberal arts, the signs of the zodiac, the labours of the months, the fables of Æsop, besides the usual arrangement of foliage, and circles, with animals in them, form the subjects. Unfortunately all the series are very imperfect. Thus we have only five out of the seven arts, six of the labours of the months, five of the signs of the zodiac, and only two of the fables.

As to the smaller stones, they are exceeding numerous, there being about seventy varieties. They represent various species of foliage; various subjects from the Bestiarium (the natural history of the time); some Minotaurs, which strongly recall the manner in which these metamorphoses are depicted in the "Ovid Moralisé," in the library at Rouen; and, finally, sundry subjects of satirical allusion, such as the ass playing on the harp.

It is not a little singular that in even those few dalles which have reached our time—the sole wrecks of this once magnificent pavement—we can almost trace the same thing that M. Didron fancies he has discovered in the sculpture at Chatres Cathedral, viz. the Speculum of Vincent de Beauvais, written in stone. Vincent de Beauvais divides his Speculum into four parts;—The Mirior Doctrinal, which teaches the seven liberal arts; the Mirior Historique, the history of the world; the Mirior Naturel, the study of nature; and the Mirior Moral, the different duties to fulfil and vices to avoid. The first is represented by the seven liberal arts, the second probably by the metamorphoses, the third by signs of the zodiac, the labours of the year, &c.; whilst the fourth is wanting, but probably has been destroyed, as it is impossible not to believe but that so common a subject as the battle of the Virtues and the Vices should have had a place in so large a pavement. It exists, however, at Canterbury, to which place I must now refer for the next chronological example.

In front of the shrine of St. Thomas à Becket remains a pavement of Opus Alexandrinum, unlike any other that I have ever seen—the porphyry, the serpentine, the piombino, and, indeed, the general lines tell of an Italian origin; but the intermixture of the black French slate, the brass fillets, the flattened circles, the fretted border in the centre, and the scale-like diaper in the angles, inform us that those materials have been put together by some western artificer, and not the "Petrus Civis," who about the same time had employed his skill at Westminster. Round this pavement, as a centre, there are now inserted about thirty-four small incised stones. Those drawn, although not in their original position with regard to each other, appear to have retained to some degree their ancient arrangement. Unfortunately it is almost impossible to make any restoration that would be completely satisfactory with regard to the angles of the opus alexandrinum; but that which presents the greatest probability would be to place the circles three deep on the north and south, two deep on the west, and none at all on the east, inasmuch as there does not remain sufficient room between the points of the mosaic and the furrow worn in the marble by the knees of the countless pilgrims who went, like Chaucer, to worship the blessful martyr. There are two lozenge-shaped stones, one containing four lions, in as many circles, and the other defaced, which help to fill up the space left between the angles of the mosaic and the indented marble above mentioned. The rest of the intervals, as well between the mosaic and the stones as between the stones themselves, were probably filled with the coarse mosaic of black slate, red French marble, and white close-grained stone.

The subjects are, as usual, the Signs of the Zodiac, the Labours of the Year, the Virtues and Vices, and chimerical animals.

No one of these series is perfect; but at the same time they are most valuable examples, both from the spirit of the drawing, and from the fact of their having escaped the restoration which has so lamentably disfigured the slabs at St. Omer; and indeed it was with great pleasure that I heard the architect of the cathedral, Mr. Austen, disclaim any intention on the subject, and I may here be permitted to thank that gentleman, not only for the facilities afforded me, but for sundry hints as to their ancient state and the sources of their material.

The next pavement of importance is now preserved in the church of St. Remi, at Rheims; it originally ornamented the space between the high altar and the body of the choir, of St. Nicaise. When this church, the *chef d'œuvre* of the celebrated architect Libergier, was destroyed by the Bande Noire of Santerre, they were sold with the rest of the materials, and for several years formed the pavement of a yard leading to a stable. However, some time ago, they were acquired by the town, and finally deposited in their present position.

These dalles differ from any of the others before described, inasmuch as the figures are formed of a single outline run in with lead. From the style of the drawing they can scarcely be earlier than the beginning of the fourteenth century, and we should probably not be far wrong in saying that they were executed under the superintendence of Robert de Coucy (the successor of Libergier), who died in 1311.

They consist of forty-eight lozenge-shaped slabs, each having a group incised on it representing some one of the Bible stories within a more or less complete quatrefoil. The series begins with the construction of the Ark, and finishes with the condemnation a second time of Daniel to the lion's den.

Mr. Tarbè, who has published these very interesting monuments, supposes that if the pavement was wholly composed of historiated slabs, we should want just as many again as those we possess; but I think it very doubtful if the whole of the slabs contained figures, inasmuch as we have several half ones, in which foliage is the only ornament.

In 1553, the Spaniards and Flemings succeeded in destroying Therouanne, a town about eight miles from St. Omer. Never, probably, since the introduction of Christianity, has a town been destroyed with such relentless animosity. The victorious Flemings carried off the works of art, and even the building materials, for trophies: thus the cathedral at St. Omer possesses a colossal figure of our Lord, with St. Mary and St. John, which came from the grand portal of the cathedral of Therouanne. In like manner, in the little village church of Blaringhem, there are about sixty incised slabs, nearly defaced, and inserted into the pavements without order. The tradition runs that they formed part of the spoils of Therouanne; and when we consider that broken pieces of them are found built up into the houses, it will be found rather easier to believe tradition in this case, when the same authority asserts, that the dalles of St. Omer came from a temple of Minerva, situated on Mount Sithieu.

As to the art of these stones we may observe, that they appear to have been executed a little later than those of St. Omer: the large ones consist of scenes from sacred history in circles and quatre foils, and the smaller in much the same subjects as those at St. Omer.

Another pavement is drawn in Willemin's work: it is there described as being in the Musée des Augustins. What became of it after the dissolution of the museum, I cannot tell. I do not remember ever to have seen it in any of the public collections in Paris, but most probably it is in the depôt at St. Denis. The design was a series of quatrefoils, touching one another, and containing foliage: the space between them was occupied by figures on a black ground, and the incised parts are stated in the text to have been filled up with bitumen.

I must now direct your attention to Italy, and there we find a somewhat different process applied: the body of the pavement is white marble, and the figures are detached by a black ground of the same material. If the ground is tolerably extensive, the black marble goes right through: if on the contrary it is small, a hole is cut in the white marble, into which a thin piece of black is then inserted: lastly, the lines of the drapery, the features, &c. are formed by incised lines, filled in with a black resinous cement. The two principal examples which occur to me are the Baptistery at Florence, and the Cathedral at Sienna. The former may almost be passed over; for though it contains a great many white slabs, with black ornaments, they are all mosaic; the only portion containing lines being a circle with the signs of the zodiac: unfortunately this has been so much worn, that little can now be made of it.

As to Sienna, we are much better off: it is certainly the only incised pavement tolerably perfect, and although of different dates, and consequently of different styles, it still retains its unity of arrangement. The first in order of time, are the representation of the Virtues, which are arranged round the altar: they are all referable, with one or two exceptions, to the beginning of the fourteenth century. The illustration represents Justice, surrounded firstly by a richly cusped circle, and then by a square border, at the angles of which are represented the winged lamps of knowledge. At the present moment I forget whether the Italians, who always know who did everything, or if they do not, always invent, refer the designs of these to Buoninsegna or Simone Memmi. However that may be, they are beautifully drawn, and are certainly without exception the very finest incised slabs which have come down to us. The rest of the church is thus mapped out. Rich borders run from pillar to pillar, both north and south, and east and west. These again enclose rich borders, separated from them by bands of plain marble. In the nave within these last, we find principally scenes from the Scriptures, executed during the latter half of the fifteenth century: some of them of latter date are attributed to Beccafumi. Others again are earlier, more particularly a curious collection of mediæval emblems of the Italian cities in opus vermiculatum, which probably dates considerably before the present cathedral. Other subjects are the Wheel of Fortune, the Seven Ages of Man, Socrates and Crates climbing the Mountain of Virtue; together with the ten sybils and figures of Faith, Hope, and Charity: these last and the sybils are placed in the aisles, and belong to the sixteenth century.

I have now, I think, given as correct an account as I can of the various pavements of incised stones that I have been able to make myself acquainted with, either by books or actua

inspection: that there are others I can scarcely doubt; more especially in Germany, a country so rich in the arts of the Middle Ages; but, neither have I seen them myself in that country, nor have I been able to find an account of any.

It appears to me very desirable that some endeavours should be made to introduce this beautiful description of pavement into the choirs and richer portions of our cathedrals and churches, and in some measure to substitute a material affording opportunities to the artist to embody his ideas, in place of what are now called encaustic tiles; which, however they may recommend themselves by the excellence of their manufacture, generally end by sickening us of their endless repetitions of the same rose, the same fleur-de-lys, and the same scroll. If this holds good with regard to our churches, how much more must it be with regard to our public buildings, where black and white marble pavements, and tiles with the badges of extinct dynasties, usurp the place of those representations of the history of a people which would indeed enable us to find sermons in stones.

I do not mean to assert that it becomes us to copy the errors of our forefathers in natural history and place them in our cathedrals. But the other sources of design remain equally open to us as to them: the Bible is the same now as then: the same virtues and the same vices affect us: the arts abstractedly are the same (would that their excellence were identical); so are the fables of Esop (for at least the beasts and birds have not changed their costume), and surely the modern discoveries in natural history would furnish us with beings as strange as any which ever presented themselves to the compilers of the Bestiaria. In fact, time has added to rather than diminished our choice of subjects.

Above all, in designing new subjects, we must be careful to the last degree to give them a sharp and energetic outline even when copying from nature; unless the subjects are really copied directly from nature, there can be no freshness or originality about them. In designing a group of figures, it will be necessary to have the living model and good stout cloth garments; for a man may copy mediæval figures for ever, and yet be unable to design as they did in the Middle Ages; for it is to be believed that then, as now, really good figures (and there were not a few of them produced in the thirteenth and beginning of the fourteenth centuries) were copied directly from the life. If monsters must be employed, why not follow the advice of Leonardo da Vinci, who recommends us in this case to copy parts of existing animals, and afterwards to join them together? but I think the giraffe, the kangaroo, and the apterix, would be as effective as any mediæval chimera; to say nothing of the resources we might derive from the antediluvian world: truth is always stranger than fiction.

Again, in designing an incised slab, our great aim should be to make the object cover the ground pretty equally, so as to leave no very large spaces of cement which would be liable to be worn into holes. When this cannot be done a small circle is left, so as to diminish the space and balance the composition. These little circles occur very frequently in the St. Omer slabs. When this space becomes larger, as in the Taurus, at Canterbury, they become quatrefoils; and when, as in the equestrian figures, it becomes still more extensive, a stem of foliage supplies their place. Another point to be considered is the termination of the lines of the drapery: they should never, if possible, end in a sharp point, but rather in a blunt point, with a nick at the end. The object of this is evident: the workman can get his drill or chisel to the end of the latter, whereas the former must necessarily be shallower towards the end, and consequently soon become obliterated in that part, especially when the stone has become worn down to the depth of an eighth of an inch, as the dalles of St. Omer have.

Again, the borders should be composed of a stout, strong network, of two or more scrolls: if a single scroll is used, figures should be introduced, to restore the proper balance, and give it strength. An additional amount of energy is got by not making the scroll homogeneous with the outer line of the border: a good strong line should be employed to divide them.

Altogether, I see no reason why incised slabs might not become the receptacles for the very best artistic talent we can procure,—only taking care always to preserve a certain energy of outline, for which we could find the most valuable hints in the Egyptian hieroglyphics and Etruscan vases.

Having designed our dalles, the next thing is how to arrange them. It will be perceived that the small ones have a plain border round each, which enables us to place them in juxtaposition, without requiring any intervening plain border: they can therefore serve as a ground in which to insert the larger subjects, or can form a subsidiary border round one of the intermediate-sized slabs, so as to enable it to range with the larger.

But of course the whole arrangement of a pavement depends on the disposition of the large subjects. Now these latter, in western Europe, are generally either lozenge-shaped or circular, and occasionally quatrefoiled. If the space required to be paved was small, such as the sanctuary of a church, a species of diaper might be formed by making the large dalles touch at their edges, as at Canterbury, and the examples from St. Denis, the interstices being filled up with plain dalles or mosaic or cement of a different colour. If the space is rather considerable, a more complicated form of diaper was adopted, as in Abbot Seabrook's tile pavement in Gloucester cathedral, where every alternate row of the diaper is made up of smaller and unequal members, thus affording ample space for detaching the subjects, by means of a plain border. When, however, the space was still larger, as a whole choir or a large chapel, it was divided into three or more longitudinal strips by means of borders: these borders were again filled with a diaper such as I have above described, only varied in each strip. The middle strip, of course, would be the widest, and contain the most important subjects; while those of subsidiary interest, such as the signs of the zodiac, the labours of the year, or the battle of the virtues and the vices, would be referred to the sides.

A border would run all round this composition, but I am very doubtful whether it would enclose the first and simplest; for the western artists during the Middle Ages were not over fond of borders, exhibiting thereby a great contrast with their Italian brethren who followed the antique, where the border often forms the largest part of the composition.

I should not omit to state that a large square subject was generally placed in the sanctuary before the altar. This, in Prior Crawden's Chapel at Ely, represents Adam and Eve; and M. Deschamps has very properly placed a great slab of the death of the Virgin in a similar position in his very clever restoration of the pavement of St. Omer. It will be perceived that I have been obliged to resort to tile pavements to find types for the general arrangement, on account of the deficiency of any example of incised stones remaining *in statu quo*. But I think that there could have been but very little difference between them in this respect, for the subjects show that the majority of incised stones were intended to be used lozenge fashion, in the same manner as we generally find the tiles arranged in the more perfect pavements which have come down to our own times. One word more on the cement, or as the French call it the mastic, with which the interstices are filled. An analysis has been made of that at St. Omer, by M. Tavernier: it was found to consist of lime, mud, pounded brick, rosin, and colouring matter; the rosin being in the proportion of one-sixth of the whole. It would appear that the materials, with the exception of the rosin and part of the lime, were made up into a kind of clay, which was burnt and ground into powder: it was then mixed with the colouring matter, the rosin, and the rest of the lime. The accounts of this process, which are repeated in the same words both in the work of M. Deschamps and M. Wallet, are rather confused; but the above appears to me to be the meaning, as far as I can make it out, inasmuch as two analyses are given and one receipt for the synthesis, which agrees with neither of the former.

M. Deschamps recommends the hot cement used by marble masons, and it is with this that the restoration has been made. M. Vandambosse, by whom the dalles of St. Omer have been restored, informed me that his cement was composed of one-quarter of wax, three-quarters of rosin, besides powdered stone and ivory black: however, he added, the workmen were not particular to a shade with regard to the proportions. Of this there is good proof in one of the large equestrian dalles fixed against the wall: in one place the cement has cracked, while in another it runs out like honey: however, it is but justice to add, that generally speaking it has stood very well. Probably where one colour only is to be employed, there is nothing superior to the modern Roman cement: unfortunately its tone is so strong, that any attempt to colour it would require so much pigment that all the strength of the cement would be destroyed. Parian cement is much better in this respect, but does not possess sufficient properties for resisting damp to recommend its use in any work required to last for centuries, as a pavement of a church.

I regret much that want of time has prevented me from making any experiments in this matter. That we can obtain a cement which will take colour and resist the damp cannot be doubtful in an age which is, par excellence, the age of cements: it can only require a little time and patience. I may here observe that M. Wallet, who describes the slabs before they were restored, enumerates the following colours as being visible;—brown of various tints; slate colour, more or less deep; brick red, more or less yellow; and bright red. One or two of the smaller slabs which have escaped the restoration, and are at present in the Museum, present us with a cement of a graniculated appearance, like coarse gunpowder mixed with little pieces of brick. That at Canterbury is much finer, and there is less brick; but when it does occur, it is in much larger pieces.

If marble be used, probably the best thing would be to burn shellac mixed with colour in the incisions with a hot iron. The lead filling in, as in the St. Nicaise pavement, is much the most difficult of all, inasmuch as only a small portion of the lead is run at a time: in this case the incisions should be undercut, and small drill holes made in the angles, in order to prevent the lead from moving.

The principal objection to this last process is, that in course of time the lead oxidises on the surface, and becomes nearly the same tint as the stone itself: the best remedy for this would be to oil or wax the stones at intervals, much in the same way that oak floors are kept in order.

Thus there are really no valid reasons why these pavements should not share in the general renaissance of Christian art. Luckily there remains enough to enable us to effect this in all certainty; and it must be a subject of congratulation that what few examples have been spared to us belong to the golden period of Christian art and poetry—the age which presented us with the Cathedral of Beauvais, the Abbey of Westminster, the Niebelungenleid, and the divine Comedy.* WILLIAM BURGES.

REFERENCES.

1. The Cathedral at Sienna.
2. St. Denis, Paris.
3. Canterbury Cathedral; before the shrine of St. Thomas à Becket.
4. St. Remi at Rheims; formerly in the Church of St. Nicaise.

5, 5, 5, 5, 5, 5, 5, 5, 5. St. Omer.

No. 1 and the equestrian figure from St. Omer are to half-inch scale, and the rest to three-quarters inch ditto, with the exception of No. 2, which is copied from "Willemin's Monuments Français."

THE HAYMARKET THEATRE.—The wood scenes for "As You Like It" are very good, and Miss Helen Faucit's personation of *Rosalind* is the most charming picture of grace and tenderness that has been seen for a long time.

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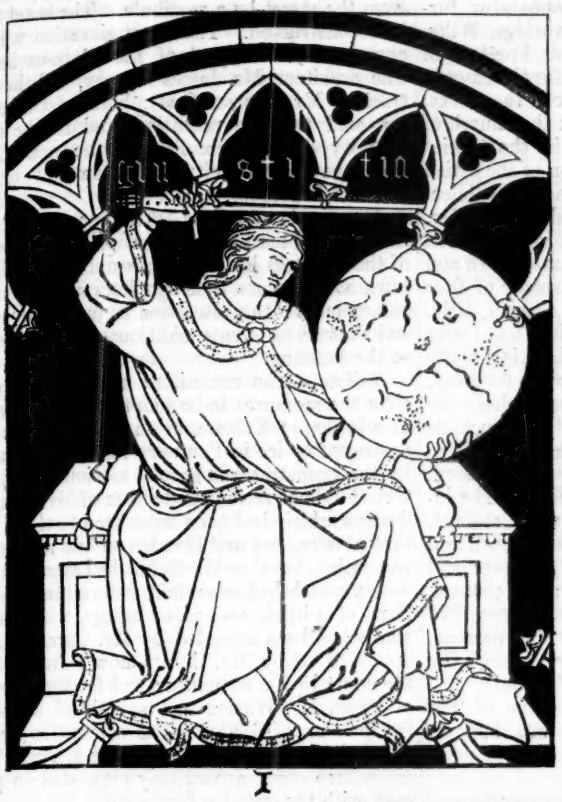
* The Dalles of St. Omer and Blaringhem have been published and illustrated by M. Hermand, M. Wallet, and lastly M. Deschamps, who has made a very interesting restoration of the pavement of the choir of the Cathedral of St. Omer, in the "Annales Archeologiques" of M. Didron.



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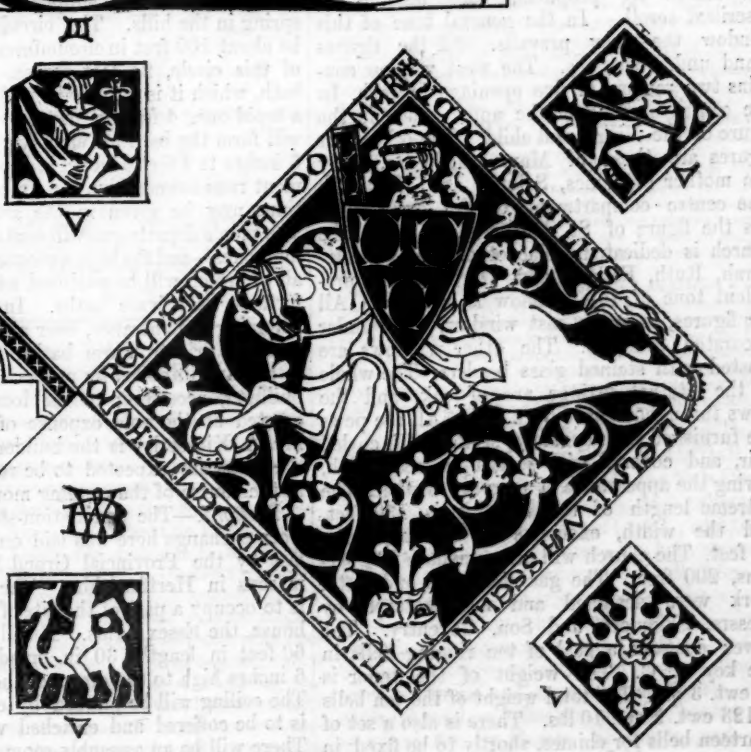

V

INCISED PAVEMENTS.

CHURCH BUILDING NEWS.

Dunham.—The new church erected at Dunham Massey, by the Earl of Stamford and Warrington, was consecrated on Wednesday in week before last, by the Bishop of Chester. The church stands on high ground, on the Chester road beyond Altrincham, and close to Dunham-park. The foundations, according to the *Manchester Courier*, were commenced about four years ago, but before one-half of the length was put in, the design, which was intended to be realized in white brick, with ashlar dressings, was abandoned. In September, 1851, the agent of the Earl wrote to six architects, in London and Manchester, inviting them to furnish designs for a church to be built of stone, adopting, as far as practicable, the foundations already put in; and the successful competitor was Mr. Harley, of Manchester, architect, from whose designs the church is now built. The style is perpendicular, and the plan cruciform, consisting of a nave, lighted from clerestory windows; north and south aisles, lighted by three-light windows, the tracery of which is of different designs; transepts lighted by three-light windows, and a chancel lighted by nine windows, varying in size and design. On the south side is the Stamford chapel, lighted by two two-light windows. A tower and spire rise from the intersection of the nave, and the transepts and chancel ascend from four moulded stone piers to an altitude of 210 feet, surmounted by a cross. The spire has enriched flying buttresses. At the east end there is a large seven-light window. The west end window is divided into five compartments, filled in with tracery. Under this window is a large doorway, with square head over a moulded arch. The other entrance to the church is through a porch on the south side. The exterior is built of wall stone from the neighbourhood of Sheffield, with ashlar stone dressings from Hollington. The first object which attracts the eye on entering the church, is the stained glass window at the east end, over the altar. In the openings of the arched head in this window is the emblem of the Holy Lamb with the monogram of "Jesus Christus." In the upper panels are angels bearing the instruments of the passion, and others in adoration. The smaller are filled up by scrolls and ornaments on a ground of ruby colour. The square portion of the window contains fourteen large openings, arranged in two tiers, of seven openings in each. In the centre of the upper range is the whole-length figure of our Lord. The other figures ranging with this are St. John the Baptist, the four Evangelists, and St. Peter. The centre compartment of the lower tier is occupied by the figure of St. Paul, the others by prophets, each bearing an inscribed scroll. In the general tone of this window the ruby prevails. All the figures stand under canopies. The west window contains two ranges, of five openings in each. In the centre opening of the upper range is the figure of the Virgin and child. The other four figures are those of Mary Magdalene, Mary the mother of James, Salome, and Elizabeth. The centre compartment of the lower range has the figure of St. Margaret, to whom the church is dedicated. The other four are Deborah, Ruth, Esther, and Dorcas. The prevalent tone of this window is sapphire. All the figures, as in the east window, stand under decorated canopies. The other windows are frosted with stained glass borders. The whole of the internal fittings are of oak, and the pews throughout have open ends. All the pews are furnished with cushions, stuffed with curled hair, and covered with scarlet morocco cloth, having the appearance of morocco leather. The extreme length of the building is 130 feet, and the width, exclusive of the transepts, 60 feet. The church will accommodate 700 persons, 200 free. The gas standards and metal work were designed and manufactured by Messrs. Skidmore and Son, Coventry. The tower contains a peal of ten ringing bells in the key of C. The weight of the tenor is 27 cwt. 3 qrs. The total weight of the ten bells is 123 cwt. 2 qrs. 10 lbs. There is also a set of fourteen bells for chimes, shortly to be fixed in the tower. These bells are furnished by Messrs. Taylor and Son, of Loughborough. The heating and ventilating are secured by a combined hot-air and hot-water apparatus, furnished by Messrs. Haden, of Trowbridge, Wilts. Messrs. Bowden, Edwards, and Forster, of Manchester, were the contractors for the church, and Mr. James Garbett was clerk of the works.

Plymouth.—On Thursday week the church of St. John the Evangelist, erected in the district parish of Sutton-on-Plym, a portion of the parish of Charles, situated at the head of Jubilee-street, was consecrated by the Bishop of Exeter. The church is designed in the Middle-Pointed style. It consists in plan of nave, north and south aisles, divided by a stone arcade of four bays, with chancel and south chancel aisle, separated by a screen of open timber, and tower at the east angle of north aisle. There is a north entrance and porch, and also a west doorway. The materials of which the church is built are Bath stone for the dressings, and the main walls of the limestone of the neighbourhood, laid in random courses and slightly hammer-dressed. The roofs are covered with grey slates. The interior is fitted up with open deal seats stained, and the timbers of the roof are also stained and exposed to view. The length of the nave and north and south aisles is 66 feet; the chancel, 26 feet; the height of tower and broach, 120 feet. The church accommodates 550 persons, and is built from a design of Mr. Ferrey's, by Messrs. Bovey and Matcham, of Plymouth.

Birmingham.—The foundation-stone of the restored spire of St. Martin's was laid on Thursday before last.

PROVINCIAL NEWS.

Boston.—The Corn-exchange is making progress, under the contractor, Mr. Webster, of Wyberton. The laminated ribs for the roof, constructed at Wyberton, are now lying in front of the Exchange. Their span is nearly 50 feet. ——The works of the New General Cemetery are approaching completion. The walks, plantings, and shrubberies have been laid out by Mr. Foxley, of the Boston Vauxhall Pleasure-gardens, at a cost, it is said, of about 400*l.* The chapels and lodge are nearly finished.

Lynn.—The Poor-law Board advised the erection of only a portion of the New Workhouse works, namely, the main buildings and the infirmary. It being considered by the Local Board, however, that the present infirmary would answer the purposes required of such a building, it was resolved to proceed with the main works only; and Mr. Bennett's tender for that portion (5,240*l.*) being the lowest, was accepted.

Banbury.—The circular baths, of which we have before spoken, are in progress at the south-eastern extremity of the borough, adjoining the canal. The water is supplied from a perpetual spring in the hills. The circular building will be about 100 feet in circumference. The centre of this circle, 24 feet across, forms the boys' bath, which it is intended should be occasionally a tepid one, 4 feet in depth. The outer circle will form the bath for men, varying from 4 feet 6 inches to 5 feet 6 inches in depth. An embankment runs round, from the top of which instructions may be given in the art of swimming. The men's department will contain sixteen dressing-boxes—and the boys a proportionate number, all of which will be enclosed and made as comfortable as private baths. In the bath-house adjoining the entrance, over a small bridge, will be some private warm baths, each department to be superintended by proper attendants. The building, according to the local *Guardian*, is erected at the sole expense of Mr. T. Draper. Mr. A. Kimberley is the builder employed, and the baths are expected to be ready for opening in the course of the ensuing month.

Watford.—The foundation-stone of the new Corn-exchange here was laid on Monday before last by the Provincial Grand Master of Freemasons in Hertfordshire. The new Exchange is to occupy a part of the site of the old posting house, the Essex Arms. It will comprise a hall 60 feet in length, 30 in breadth, and 23 feet 6 inches high to the crown of the arched ceiling. The ceiling will be pierced by eight lights, and is to be coffered and enriched with mouldings. There will be an assembly-room at its east end, and a billiard-room over it. Opening into the principal half will be seven rooms, for the use of the corn buyers. The building will be approached from the street by a vestibule. The hotel is to be reconstructed. The street elevation will, in appearance, form part of the Corn-exchange. The architect, Mr. James Murray, and the contractor, Mr. Thomas Pratt, both of Coventry, are said to have recently acted in the same capacity at the erection of the new Corn-exchange in that city. The amount of the contract is 18,000*l.*

Newcastle-under-Lyme.—That portion of the new covered market here appropriated to the use of the butchers having been found too small, the town council some time ago determined upon its enlargement: this alteration is just completed, and thus about twenty additional stalls are added to the building.

Kelham.—The committee appointed to consider the measures to be adopted for the erection of a bridge at Kelham, in the place of the one destroyed by ice in February last, have reported to the magistrates in special sessions, that Mr. Cubitt did not recommend either of Mr. Worth's designs which had been submitted to them, and that Messrs. Fox and Henderson had not sent in any design, but that Mr. Cubitt had approved of a design which had been laid before him, by Mr. Carr, of a brick and stone bridge, which afterwards had been amended by Mr. Carr, and also approved of by Mr. Cubitt, now submitted to the court by the committee, and for the erection of which Mr. Waring had submitted a tender for the sum of 6,900*l.* The committee recommend the court to adopt the same design." The committee were accordingly requested to proceed with the erection forthwith.

Manchester.—The foundation-stone of the new mechanics' institution was laid on Thursday before last at the corner of David-street, Portland-street, by Mr. Oliver Heywood. The design was furnished by the late Mr. Gregan, architect, and, according to the local *Courier*, this design will be carried out in its integrity, under the superintendence of Mr. W. R. Corson, of Leeds.

Droylsden.—On Saturday before last the ceremony of laying the first stone of new schools at Clayton, in this parish, was performed by the agent to Mr. P. R. Hoare, owner of the estate, at whose sole cost the building is to be erected. The site of the new school is a field adjoining Clayton Hall.

Blackburn.—According to the new valuation, just completed by Mr. Railton, the following appears to be the number of assessments of the rateable value of property in each ward of this town:—

	Assessments.		Valuation.
Park ward.....	1,850	...	£20,808 15 0
St. Peter's.....	1,523	...	16,604 5 0
St. Paul's	1,892	...	17,910 10 0
St. Mary's.....	1,214	...	21,971 10 0
St. John's	1,697	...	16,870 10 0
Trinity	1,763	...	17,046 10 0
	9,939	...	£118,212 0 0

Wigan and Ince.—Progress is now being made with the Wigan cemetery. A new road to it, 12 yards wide, has been cut from the highway to Warrington, and a large iron girder bridge has been erected across the North Union Railway, at the point where the new road terminates. The lodges and gates of the cemetery will be close to the westerly side of the bridge. The Episcopal chapel is 7 yards out of the ground, and the foundations of the Dissenters' chapel and Roman Catholic chapel are also laid. Workmen have commenced the drives, walks, &c. The Ince Burial Board have also selected a site for the proposed cemetery for the township of Ince. Their plot consists of 3a. 2r. 10p. and, like the Wigan ground, forms part of the Hall of Ince estate. The price is 300*l.* per acre. The Ince Board are now obtaining plans and estimates for two chapels.

Slaithwaite.—On Tuesday week the foundation-stone of the Slaithwaite gas-works was laid by the agent to the Earl of Dartmouth.

Newcastle-upon-Tyne.—Mr. Grainger is about to submit to the corporation a plan for a new cattle-market. The site proposed is ten acres in extent, near to the Water Company's reservoir at the Westgate.

Glasgow.—The new suspension-bridge, near the Humane Society's house, is in progress.

The iron pillars intended to surmount the stone piers are placed in position, and otherwise nearly completed; and two chains have been suspended across the river.——The long intended improvement at the north end of Glasgow bridge is now in course of being carried out. The parapets of the wing walls have been cut short by some 25 feet or so, and the foot pavements towards Broomielaw and Great Clyde-street will be rounded quicker off, thus affording a greater width of carriage-way for the Broomielaw and Clyde-street traffic, and easing off the over-bridge traffic from these streets.

Perth.—Sir Hugh Munro, of Foulis, bart. has bequeathed his estate of Milton, in Rossshire, to found a free school in Perth, for the education of the children of tradesmen belonging to the town. The rental of the property, being about 300*l.* per annum, is to be applied to the support of the institution; and the sum of 1,000*l.* is left for the building of the schoolhouse. The school is to be in connection with the Established Church of Scotland.

Arbroath.—On Saturday week, according to the local *Guide*, the new market buildings were opened, and a dinner was given in the hall henceforth to be used as a corn exchange.

ST. PETER'S-IN-THE-EAST, OXFORD.

THE great interest which has always attached to the Church of St. Peter-in-the-East, its venerable antiquity and curious architecture, give it rank among the most valuable remains of ecclesiastical architecture, and on this account its preservation is an object of considerable importance.

For some years past the south-east angle of the chancel has exhibited increased signs of weakness: the turret is several inches out of the perpendicular, and so also are the walls, which, besides this defect, present fractures in many places. These injuries at length assumed so threatening an aspect, by their enlargement across the stone roof, as to require immediate attention. The warden and fellows of Merton College, the patrons, undertook the work in the most generous spirit, and employed Mr. Buckler to carry out their intention.

When it is considered that the south wall yielded to the pressure of the stone groining of the roof so far back as the commencement of the fourteenth century, and required the aid of a powerful buttress to check the accident, the existence of several of the present defects may be easily accounted for, as, for example, that in the Norman window on the south side, which was crippled at the time referred to. There can be no doubt that the principal defect was in the foundation of the turret at the angle: it has gradually subsided from the want of sufficient strength, a fault of no common occurrence in Norman architecture, and in this instance resulting from the fact that the walls of the crypt were built nearly to their height without any additional bulk as a preparation for the staircase turrets, the stonework for which was abruptly started at the ancient ground-line. The turret is 5½ feet square, and the projection of the face, beyond the foundation, 18 inches: rough stones were loosely piled up between the footing and the overhanging turret, as if intended to answer the purpose of a shore, but the ground was no sooner removed from it, than the rude casing fell away from time to time, and revealed the evidence of the change which had been made in the design at this place. The turret now stands upon a basement of solid masonry, and the defective portions of the adjoining walls have been repaired.

The angle rib of the roof was sadly depressed, but it has been restored as nearly as possible to its original curve, and the joints made perfectly secure. The ribs receive no support from the stone vault: they have only to sustain their own weight, and may be regarded as solely ornamental to the interior.

The design is a chain pattern, which would have been greatly enriched had the carver resumed his labours after the stonework was fixed.

PETERBOROUGH CATHEDRAL.—The Dean and Chapter have determined on a steady and gradual course of repairs and improvements in and about the Cathedral.

TO FIND THE STRENGTH OF A BEAM SUPPORTED BY PROPS.

WHERE a beam of any material is supported at its two ends only, the strength thereof is found by the formula

$$S = c.\frac{b.d^2}{l}$$

Where S = weight which the beam will bear, b = its breadth, d = its depth, l its length, and c is a constant quantity depending on the material of the beam.

If then we place a prop under the centre of the beam we divide it into two other beams, each of which is half the length of the former beam. Therefore, if we call S the strength of the unsupported beam, and s that of the half-beam, it follows that

$$s = c.\frac{b.d^2}{\frac{1}{2}l} = 2.c.\frac{b.d^2}{l} = 2.S$$

And since the whole supported beam consists of the two halfs whose separate strengths are each double of that of the unsupported beam, therefore the strength of the propped beam is four times that of the unpropped beam, or is equal to 4 . S.

If the beam has two props, dividing the length into three equal parts, then since the length of each part is $\frac{1}{3}l$, the strength of each part

$$= c.\frac{b.d^2}{\frac{1}{3}l} = 3.c.\frac{b.d^2}{l} = 3.S.$$

And since the strength of the whole propped beam must be equal to the sum of the strengths of its several parts, therefore its strength is equal to three times that of one of the parts, or is equal to 9 . S. In other words, the strength of a beam divided by props into three equal parts is nine times the strength of the same beam without props.

In the same way we can readily obtain a general rule for the strength of a beam having any number of supports. Let n be the number of equal parts into which a beam is divided by $n-1$ props, let s be the strength of each part,

$$\text{then } s = c.\frac{b.d^2}{\frac{1}{n}l} = n.c.\frac{b.d^2}{l} = n.S$$

and since there are n of these parts, therefore the total strength of beam $= n^2.S$.

Or, the total strength of a beam divided by props, placed at equal distances, into any *number of parts*, is found by multiplying the strength of the beam without props, by the *square* of the *number of parts*.

When a beam has a prop which is not in the centre but at a distance of m feet from one end and of $l-m$ feet from the other end, if we call s_1 the strength of the former part, and s_2 that of the latter,

$$s_1 = c.\frac{b\,d^2}{m} = \frac{l}{m}.c.\frac{b\,d^2}{l} = \frac{l}{m}.S$$

$$s_2 = c.\frac{b\,d^2}{l-m} = \frac{l}{l-m}.c.\frac{b\,d^2}{l} = \frac{l}{l-m}.S$$

And the total strength of the propped beam $= s_1 + s_2$,

$$= l\left(\frac{1}{m} + \frac{1}{l-m}\right).S = \frac{l^2}{m\,(l-m)}.S$$

In the same way may be found the strength of a beam supported by any number of props placed at irregular distances apart.

E. W. TARN, M.A.

THE TOMB OF AYLMER DE VALENCE, WESTMINSTER ABBEY.

MY notice of "[illegible] H.'s" interesting letter of the 28th of October last (*Builder*, Vol. XII. p. 557), is indeed late, but I had not the opportunity of reading it until the present week. Your correspondent speaks of the "evident inaccuracy" of an anecdote quoted by me in the address to the Worcester Architectural Society, viz.—that Aylmer de Valence's tomb in Westminster Abbey was removed to make room for General Wolfe's monument. We must remember that, in quoting Horace Walpole, I quoted a living witness—one personally interested in the subject. His was not a mere hearsay report; and what does he tell us? That the Dean of Westminster had at first objected to the arrangement of removing this tomb for Wolfe's monument, but that he was wrought upon to consent to the removal. Walpole was doubtful as to the fact: he wrote to the dean, expressing his regret that this fine monument should be removed, and asking for it as an ornament for Strawberry-hill. What a translation, from Westminster Abbey to Strawberry-hill! Then he tells us that after a fortnight's delay, the dean avowed the story under his own hand, viz.—mistaking the earl's tomb for that of a Knight Templar; that upon discovering whose it was, he had been very unwilling to consent to the removal, and at last had obliged Wilton to engage to set it up within 10 feet of where it stands at present.

Now I would ask whether Walpole's letter was not sufficient to lead me astray? and I would also ask whether the removal of the ancient tomb might not have been commenced, and been happily stopped, from difficulties intervening, or from a better feeling arising amongst the chapter; and was it in the efforts made during its partial removal that this noble monument was injured? It is admitted that either from unpardonable neglect or wilful injury "considerable dilapidations" have taken place.

It would be worth ascertaining whether the space which Wolfe's monument occupies was sufficient to have admitted the older one. If too small, all thoughts of removal must have been at once abandoned, unless De Valence's monument was to have been subjected to monstrous curtailment.

Notwithstanding Walpole's explicit statement, I admit that the anecdote in my paper should not have rested on his unsupported testimony, and is too strongly expressed. Instead of saying that the reckless deed was actually perpetrated, I should have merely shown that it was contemplated or perhaps attempted.

J. H. MARKLAND.

ART-WORKMEN.

CONVERSAZIONE, ARCHITECTURAL MUSEUM.

THE *conversazione* at the Architectural Museum on Monday evening last was exceedingly well attended, and passed off with much spirit and satisfaction. There were probably 500 or 600 persons present. Earl de Grey presided. The treasurer, Mr. Scott, read a report, from which we take the following illustrative passages:—

"The one great object of this institution is the improvement of that large and important class employed on architectural works who may be included under the denomination of art-workmen, and, through them, the restoration to their proper level and estimation of the branches of art which they represent.

It is a peculiarity in architecture, as distinguished from the other fine arts, that it requires for its perfection workmen and artists in almost every branch of ornamental workmanship, and is in itself a concentration of nearly the whole range of decorative art. In the best ages of architecture, whether under the civilization of the ancient world, or in the days which heralded our own, this fact was thoroughly appreciated, and it was considered the province of architecture to promote the perfection of all the subsidiary arts. In our day, however, this has been unhappily lost sight of. Painting and sculpture, in their higher branches, have estranged themselves from architecture, while she has neglected to foster those humbler branches of the sister arts which she has retained in her service, and has allowed them to sink into mere handicrafts, scarcely removed a step above the mechanical operations of masonry or carpentry. The humble artificers who are employed in our decorative work, have been suffered to go on without any means being provided for their artistic education and improvement, and really without the means of knowing whether their productions were good or bad. And, strange to say, such has been the apathy of the public, and their want of appreciation of such subjects, that they have never appeared aware of these facts: they seem never to have discovered the demerits of the works with which they are surrounded; and, even now, it is not uncommon to find educated men filled with admiration of the genius of some precocious stonemason, whom they have seen boldly cutting into a piece of stone, and with unhesitating confidence producing sculpture somewhat inferior to that of the gingerbread kings at Bartholomew Fair. We do not pretend to say that *our* movement has been the first to remedy this state of things. Individual architects and others have done much within their own spheres to ameliorate it. Ours, however, claims the honour of being the first PUBLIC and SYSTEMATIC step taken for the benefit and improvement of the art-workman.

If you will look into our published catalogue, you will find a detailed statement of what we have already done, and wish to do. Our first principle is to bring within the reach of the workman as large a collection as possible of objects of study, as it is for the most part quite out of his power to visit them if not brought within his reach. Our next object is to excite his interest and to induce him to make use of the means we are placing at his disposal."

The Rev. Mr. Maurice, Archdeacon Thorpe, Mr. A. Beresford Hope, Mr. S. C. Hall, Mr. Godwin, the Rev. Mr. Boutell, the Sub-Dean of Salisbury, Sir Walter James, and others, addressed the meeting at some length; and thanks were voted to the treasurer; the hon. secretary, Mr. Clutton; the curator, Mr. C. B. Allen, &c.

Amongst the contributions for the evening we may mention the model of the Crystal Palace, as proposed by Sir C. Barry, and lent by him; a large collection of modern fine art work, in brass and iron, by the Messrs. Hart, of the Strand; a collection of cups, book-covers, in silver, &c. by Messrs. Skidmore, and some ironwork for the new Oxford Museum; a panel incised stone, by the Messrs. White; some

specimens of glass, by the Messrs. Powell; drawings of glass, from Altenberg, taken by Mr. A. O'Conner; designs for glass windows, by Mr. Oliphant; a glass window, by Mr. Lavers; the cartoons for an altar-piece, by Mr. A. Rowan, typical of the Incarnation; some specimens of Oriental workmanship, by Mr. Rhode Hawkins; a number of specimens of panels, &c. of glass mosaic, by Mr. Stephens; a model of the top platform of the Parthenon, showing the curvature of the east and west points, and two sides, also the rise in the centre, exhibited and explained by Mr. Jopling; a collection of photographs from Venice, by Mr. Scott; some specimens of Spanish terra cotta, by Mr. Rogers; some casts of natural leaves, by Mr. French; and a vase, Eastern workmanship, lent by Mr. Owen Jones.

COMPETITIONS.

Lincoln Cemetery.—Although the committee, as we said last week, had selected a certain number of designs, and had even recommended one for the first prize ("Justitia"), the Board have determined on referring the whole of the designs to an architect for him to report upon, and have invited Mr. Scott to undertake the matter. This is a proper step. The authors of the design marked "Justitia" had identified themselves by referring to works which were being performed under their direction elsewhere, contrary to the advertisement, which says,—"If any name is written on the plans, or any written or verbal communication made, directly or indirectly, to indicate any competitor's name to any member of the Board, or the officials, previous to the plans being selected, such plans will be absolutely rejected." The following are the mottoes of the other selected designs:—"Ad Rem cum Deo," "Hope," "Experience," "Spes," "Industria," "Confide in Deo," "Nulla fallacia est," and "Studii Summa."

"Barrack Committee."—Allow me to protest against the injustice contemplated by the "Barrack Committee," in keeping *"all plans sent in,"* as stated in their otherwise liberal advertisement.—M.

Dudley Workhouse.—The plot thickens. Every step that is taken sinks the Guardians deeper in the mud. Notwithstanding the denial of foul play so emphatically given to the *Builder* correspondent, will they say that *no attempt* was made to pass a certain set of plans by name? or rather to vote for a certain individual before his plans ever were known? Scorning the advice for professional assistance, the Guardians took upon themselves the decision—made it in favour of a "picture." The result is, the plans are returned from London, with a voluminous letter of forty-eight pages of foolscap, pointing out alterations that were required. The letter likewise suggested the *docking* the elevations of the ornamental work, "more especially of the entrance building, and of the central tower of the main building," which they thought might be dispensed with. The Poor-Law Board were apprehensive that *after their* reductions were made, *the cost of the building would exceed the architect's estimate.* The above is no hearsay, but gathered from the local press. Do you do right, then, sir, to let the matter rest? Is it not so flagrant a case of *mal competition* that it deserves the heartiest castigation that can be inflicted?

ARCHITECTUS.

ARCHITECTS' CHARGES.

You will do well, I think, to open your pages to the discussion of architects' charges. I have found great difference of opinion among *professional* men as to how the usual 5 per cent. is made up. Some books state that it is made up of four equal parts, thus:—

Design and working drawings	1¼
Specification	1¼
Approximate estimate	1¼
Superintendence, including supply of detail drawings	1¼
	5 per cent.

Again, the evidence of some three or four architects lately taken in the Court of Queen's Bench was to the following effect:—

Design, including working drawings, specification, approximate estimate, superintendence, and further details	5 per cent.
If not actually built:—	
For design, working drawings, specification, and approximate estimate	2½ per cent.

And lastly, in a recent number of your journal, I find Professor Donaldson stating that 2 per cent. is the proper charge for superintendence, and the remaining 3 per cent. for designs, working drawings, and specifications. No mention is made of estimate, which I suppose he includes in the last-mentioned item.

It is evident these three cases, while agreeing in 5 per cent. as the maximum, are at variance as to the proper charge in the event of the works not proceeding. I should be glad to know from good authority what is really the charge adopted by the profession *generally*, and your journal seems a likely medium to elicit and supply this information.—B.

ADDITIONAL WORKS SELECTED BY PRIZE-HOLDERS IN THE ART-UNION OF LONDON.

From the Royal Academy.—Skaters, C. Lees, 105*l.*; Lallah Rookh, F. Wyburd, 80*l.*; Cuddie Headrigg, D. W. Deane, 60*l.*; Gathering Watercresses, W. F. Witherington, R.A. 60*l.*; Landscape, G. Cole, 60*l.*; At Sonning, G. C. Stanfield, 50*l.*; Erridge Park, C. R. Stanley, 35*l.*; Italian Mother praying for her Sick Child, H. Pickersgill, 35*l.*; Lane, Hastings, J. Meadows, 35*l.*

From the Society of British Artists.—Quiet Evening on the Thames, H. J. Boddington, 60*l.*; at Lynton, A. Clint, 35*l.*; Etretat, Normandy, J. Wilson, 35*l.*; Girl and Chickens, J. T. Perle, 35*l.*; Luccombe Chine, J. Danby, 35*l.*; Cymon and Iphigenia, A. J. Woolmer, 35*l.*

From the National Institution.—Autumnal Morning, A. W. Williams, 100*l.*; Lane Scene, A. W. Williams, 75*l.*; Kilchurn Castle, S. R. Percy, 75*l.*; Scenery in Knowle Park, E. J. Cobbett, 60*l.*; Feeding Rabbits, E. J. Cobbett, 50*l.*; Showery Weather, E. C. Williams, 35*l.*; Reading a Chapter, C. Dukes, 35*l.*; Salmon Trap, F. W. Hulme, 35*l.*

From the Water-Colour Society.—Hadley Castle, G. Fripp, 42*l.*

From the New Water-Colour Society.—Belted Will's Tower, W. Bennett, 75*l.*; Berry Pomeroy Castle, E. G. Warren, 73*l.* 10*s.*; Ye hae tellt me that afore, Jemmy, H. Warren, 105*l.*; Fishermen off the Nore, T. S. Robins, 25*l.*

THE BATH-ROAD BRIDGE AT BRISTOL.

In place of the cast-iron bridge at Bristol, which was recently destroyed by a coal-barge, the Dock Committee determined to erect a bridge of wrought-iron; and on the 13th of April Mr. Finch, of the Chepstow-bridge works, made arrangements with their engineer, Mr. T. E. Blackwell, to construct it. This bridge is to consist of nine girders, each girder being 107 feet long, 5 feet deep in the middle, and 4 feet at each end; and weighs, each, about 25 tons. Upon the top of these girders is placed strong planking, and over this is formed the road. As there was novelty in the mode of conveying and erecting the two girders now in place, we may briefly state how this was accomplished. The girders, 107 feet long, were put together and rivetted complete in the maker's yard. When ready for shipment, they were taken each separately out of the yard, and placed alongside the wharf. At high-water a barge was floated to the wharf, and as the tide receded, the barge was left aground on the mud bank. Balks of timber were then laid, one end resting upon the barge and the other on the wharf, immediately under the bottom flange of the girder. Upon these balks rails were laid: these were greased, and the girder was slided gently down until it rested on the deck of the barge, and being longer than the barge by about 36 feet, there was 18 feet at each end of the girder overhanging. The balks were then removed, and the girder lashed to its place, edgeways on the barge, the underside of the overhanging ends of the girder being about 4 feet from the surface of the water. When the tide again rose, the barge with the girder upon it floated, and was towed away from the river Wye, at Chepstow, to Bristol.

The masonry has been prepared, and stands about 17 feet above the high water-mark; a substantial square block on each side of the river: upon these two blocks of masonry the girders have finally to be placed. About 40 feet below the bridge, Mr. Finch erected two substantial stages, formed of balks of timber, firmly attached to the ground, and stayed in every direction. These stages or platforms stood at high water about 3 feet 6 inches out of the water: the steamer then brought up the barge with the girder upon it, with the flood-tide, to the bridge, so as to arrive there about half an hour before the tide turned, and before the current was very strong: when arriving at the stages above described, the barge was placed across the stream, so as to allow the two overhanging ends of the girders to come over the stages: they were retained in this position, and a valve in the barge was opened, and the vessel partially filled with water, until she sank sufficiently to leave the overhanging ends of the girders resting upon the stages, and until she was so far immersed as to be moved down the stream by the receding tide. The girder is now across the stream, resting upon these two stages: the tide now recedes, until there is nothing left but the fresh water from the hills flowing down the bed of the river, the girder then being left high above on the stages. We will now see how the operation of lifting the girder and conveying it to its place is performed. Two mud barges, used by the Dock Company, at Bristol, for conveying the refuse out of the docks are obtained: these are large flat-bottomed boats that will carry 67 or 70 tons each. Upon each of these barges is erected a stage or tower, so high, that when the barges are resting on the bed of the river at low water, the top of the tower shall reach, or nearly so, to the under side of the girder, as it rests upon the wood stages across the river: as soon as the tide has receded sufficiently low, these two barges, with the towers upon them, are placed under the girder, and are moored so that they shall not be able either to move up or down the stream, until required to do so. Being all prepared, as described, they remain stationary, until the tide turns; when the tide begins to float the barges, and as the tide rises, so the barges rise, until the towers press against the girder, and lift it off the stage; and as the tide continues to rise, so the girder is carried upwards, until it is finally lifted by the rise of the tide as high as the top of the masonry upon which it has to rest. The chains that hold the barges at one end are slackened out, and those at the other are tightened, and the barges are thus moved forward with the tide, until the ends of the girder are brought over the masonry, the exact place where the girder has to be fixed. It is held there until the tide turns; and, as this recedes, the barges sink, and deliver their burden to its final resting place on the masonry, and are carried down the stream with the receding tide, and anchored in a convenient place, ready to perform the same operation again.

POTICHOMANIE.

The new practitioners of this old art take a much higher flight than our good old grandmothers of the sand bottles, and are content with no less a victory than an exact imitation of everything in the shape of porcelain that falls into their unmerciful clutches. To this all their energies are directed: on this all their talent is displayed. No improvement in the characteristic of the art is sought after, or the perfecting its capabilities as a distinct branch of the ornamentation and colouring of beautiful forms: all this is cast aside for the tempting *ultimatum*, which is to make blown-glass appear baked pottery, and coloured prints pass as porcelain painting. But no human being could ever mistake the one for the other on close inspection, and painted porcelain invites minute examination; we must, therefore, pronounce the present practice of Potichomanie as an unmistakable abortion. It is a misfortune that popular favour should have taken this bent, when so many beautiful effects are within its reach, and might so easily be obtained, if those who practise the art studied the harmony of colour, the disposition of form, the peculiarities and difficulties of the process of application, overcame the latter, and turned the former to advantage.

I would suggest that the forms of the beautiful Etruscan vases in the British Museum, should be reproduced, as the material which Potichomanie is best fitted to render beautiful. These, when produced in clear thick glass, might be decorated with Rowney's water-colour prints, or the chromo-lithography of Vincent Brooks, especial care being taken in harmonising the background with its subject, so that all violent contrasts may be avoided. This would give us the pure beauty of *form* in the vase, and when we examined more minutely the *colour* of the prints, we should there find no disappointment. Knowing perfectly well what they were, we should feel pleasure in examining their various claims to our admiration, and be willing to allow them a niche in the vast temple of Beauty and Art. The art would then depend on its own foundation, and not rely on any tricky deception for its toleration amongst us. In this way many beautiful objects might be obtained, at a cost which would place them within the reach of all. And, then, as a distinct and really legitimate branch of art, let us call it by a name which neither breaks our teeth nor excites commiseration; for this, I would humbly suggest that the treatment I have proposed should be distinguished from its meretricious sister by the name of "Rallia Ware."

But allow me, through your columns, to raise my voice against the present practice of Potichomanie, merely as an imitation of another and much higher art;—to protest against the scattering, broadcast, vile, and unsightly Chinese caricatures of dragons and houses, outrages of nature and perspective;—against the transferring body and bones, the barbarous and puerile efforts of any nation which happens to be ignorant in art to the hearths of a highly refined and educated people; against the reproducing all the *defects* of porcelain of every "school;"—and against the *ultimatum* of an English art being the low, trivial victory of a take-in!

A Marlborough-house Student.

Notices of Books.

The Louvre; or, Biography of a Museum. By BAYLE ST. JOHN. London: Chapman and Hall. 1855.

THE history of the Louvre runs over many centuries,—if we go no further back than the year 1204, when Philippe-Auguste built the great tower there, that long frowned over Paris. Mr. Bayle St. John has sketched this history with a pointed pen, and has produced a pleasant book, which will interest as well those who stay at home at ease, as those who have visited, or are about to visit, the finest home of which the Arts can boast. François I. destroyed the great tower, and to him may be ascribed the commencement of the present building, during the Renaissance, when the revivers of the antique style, or what they considered such, were combatting and overlaying the Gothic. Mr. St. John speaks of an allusion to the discussions which accompanied this change by a rhetorical writer of the end of the sixteenth century, Estienne Pasquier. Pasquier says that—

"There still existed some people of the old school who admired all the edifices built 'since the coming of the kings,' as Notre Dame, the Holy Chapel, and the Palais, which common observers, adopting the fashionable term of praise, esteemed to be all constructed in the antique style. 'Yet, in the judgment of brave architects,' he continues, 'there is nothing antique about them; they are built after the modern fashion, and have none of those rare traits which the ancient Greeks and Romans used in their architecture; but it may truly be said that a Louvre was constructed by the late M. de Claigny, in the antique style, although it is new; and he has expressed in it everything that was fine and worthy of old.' On the other hand, as the same writer tells us elsewhere, according to a great architect, Maistre Jacques Androuet, dit Du Cerceau, the Sainte Chapelle was the finest modern building known; and he spoke slightingly of the *parades* which M. de Claigny, or Clagny—that is to say, Pierre Lescot, to whom François I. gave the Abbaye of that name—had borrowed from the antique. We have here the record of a conflict of opinion, which does not seem to have left any other documentary trace; but it is difficult to reconcile the admiration of Du Cerceau for the master-piece of the time of St. Louis, with the accusation directed against him by M. Vitet, that he introduced the colossal order from Italy."

Pierre Lescot, aided by Delorme, Lemercier, Perrault, Bernini, Mansart, and Duban, followed each other at wide intervals, as architects. Claude Perrault, who designed the frontispiece and colonnade of the Louvre, was born in 1613, and died in 1688. He had studied medicine. Boileau refers to him, when he speaks of one who "from an ignorant physician became a good architect." The Colonnade of the Louvre has had more praise than it seems to us to deserve. Perrault translated Vitruvius, and published some other works on architecture.

After the revolution of 1848, the new government appointed Mons. Jeanron director, and this gentleman Mr. St. John regards as having rendered greater services to the museum than any other individual since its foundation. Under circumstances of extreme difficulty, when the court of the Louvre and the yards were occupied by five or six thousand insurgents, he contrived by his addresses to protect the building from spoliation. Although they consented to refrain from sacking the museum, they determined to destroy the bronze statue of the Duke of Orleans in the court, and were only persuaded from it by the pledge that he would cause the obnoxious statue to be removed during the night.

"The rain was falling in torrents, and the night had become dismally dark. That colossal monument was difficult to move. No tools, no workmen were ready. M. Jeanron made an impassioned appeal to some of the people of the museum, and to M. Debay, the sculptor attached to the Louvre. They worked all night, and by daylight the statue had, indeed, been carried to the Pavilion Beauvais, and carefully surrounded by a hoarding. Only just in time, for immediately afterwards the folk from the Palais Royal, flushed with wine, came tumultuously to ascertain whether the engagement entered into with them had been kept. The bas-reliefs on the pedestal had not yet been unsealed, and numerous hammers were at once raised to shatter them. But a man in the crowd saved them by saying that M. Jeanron had proved himself to be a diligent workman, that he was himself of the trade, and could not understand how so much work had been got through in so little time. 'The least we can do, therefore,' he added, 'is to make him a present of the two bas-reliefs for his trouble."

From Mons. Jeanron Mr. St. John repeats many opinions, especially on the subject of restoring works of art, wherein our author speaks strongly, giving a frightful account of such doings in Paris:—

"'We have sometimes,' said a sculptor working at Versailles, 'very sad fellows in our ateliers, the poor and impudent devils who serve as our models. They have carried many a word from the language of our class to the barriers, and other out-of-the-way places, where a hideous language is spoken for hideous confidences. To kill a man, in slang, is 'to clean him.' This word came from us. To clean a picture is to kill it."

Mr. Jeanron objects, and with justice, to the alterations made by enlargement to integral and pure architectural monuments,—

"Whose complexion had been pre-established in the mind of the architect, their size fixed, and their compartments exactly divided in their variety—which have been completely destroyed, as manifestations of that first instinct of the beautiful and the proper, which the creating artist had known how to introduce. Architecture also has its framework and its proportions. Thus the admirable Hôtel de Ville of Paris, increased beyond measure, enlarged and continued, in pretended respect of the style of the primitive monument—with the same fineness—the same lightness of form and ornamentation—appears now as a colossal mass, on which are written, as it were, an imperceptible and flimsy tissue of ornaments, which were only proportioned to the old edifice."

There are parts in which the book is a little spun out, but as a whole we can safely recommend it to those who would get a knowledge of the Louvre and its contents.

Miscellanea.

IRON AND STEEL: IMPORTS AND EXPORTS.—Returns issued from the Parliamentary Paper Office show that, comparing the imports with those of 1853, there was a large increase last year in iron ore, and also in wrought iron and steel goods; but the supply of the latter came chiefly from Denmark, France, and Holland, in 1853, while last year the United States, Belgium, and France, were the chief sources of it. As regards bar iron, there is a decrease of almost precisely the quantity received from Russia in the preceding year. The exports of foreign iron show a decrease. The quantities of British iron exported last year were as follow:—Pig iron, 293,432 tons; bar iron, 604,662 tons; bolt and rod iron, 12,056 tons; cast iron, 69,338 tons; iron wire, 7,987 tons; wrought iron, 176,203 tons (including 26,084 tons of anchors and grapnels, 30,709 tons of hoops, and 8,141 tons of nails); old iron for remanufacture, 12,242 tons; and unwrought steel, 20,793 tons. Comparing these figures with the return for the preceding year, we find that the decrease in the quantity of pig iron exported is exactly accounted for by the loss of Russia as a customer, which, in 1853, imported from this country 639 tons. Of bar iron Russia imported from Britain, in 1853, 5,080 tons, but the decrease in the exports of last year is about 40,000 tons, the remainder of the difference being accounted for by the diminished demand from the United States. The export of cast iron has increased, notwithstanding the closing of the outlet afforded to the Russian markets, which in 1853 took 1,499 tons.

A CAUTION. — While a child, under two years of age, the daughter of Mr. Holt, organ-builder, Halifax, was watching the progress of some excavating work, and standing close behind on the left side of a workman who was casting out earth, he accidentally struck the child on the face with his spade, actually cutting off the nose.

AN ANTIQUARIAN QUERY: GLASTONBURY.—Can any of your readers oblige me with any information respecting the "Pyramids" mentioned by William of Malmesbury ("History of Kings of England," section 21), as being close to the church of Glastonbury? One of them is described as 28 feet high, and having five stories; another, as 26 feet high, and of four stories. It appears that they were Christian monuments of the Saxon period. I do not suppose that any traces of them are still in existence, since one of them, in Malmesbury's time, was threatened with "ruin from its extreme age;" but I should be glad to be informed whether anything is known respecting them, beyond what Malmesbury has said in the passage above quoted, and whether any monuments of a similar character ever existed in this country.—BETA.

DECORATION OF GLOUCESTER.—Mr. Clarke, architect, of Gloucester, has been engaged to superintend the decorating of the city for the Royal Agricultural Show. His remuneration, according to the *Carlisle Journal*, is to be twenty guineas.

METROPOLITAN ASSOCIATION FOR IMPROVING THE DWELLINGS OF THE INDUSTRIOUS CLASSES.—According to the eleventh report of the directors of the Metropolitan Association for Improving the Dwellings of the Industrious Classes, they have purchased during the last year two houses in Albion-buildings, Bartholomew-close, Aldersgate-street, tenanted by twenty-four families, each occupying two rooms. Dwellings for 108 families on the freehold site in Nelson-street, Bermondsey (near the London-bridge Railway termini), are also on the point of completion: they consist of 102 sets of three rooms, and six sets of four rooms. When the whole are completed they will have provided a total amount of improved accommodation for 395 families and 362 single men. In consequence of the applications from the inhabitants of different metropolitan districts for the apportionment of capital, and to grant the same immunities to persons resident in the metropolitan districts as could be enjoyed by those resident in the provincial towns and districts, without incurring the further expense of obtaining separate charters, the directors have obtained a further supplemental charter, enabling them to effect this object, that the whole of England and Wales may now be worked by such district committees as the respective shareholders may appoint, yet preserving that unity and principle of action so essential to accomplish a beneficial result.

THE SAPPERS' CHURCH IN THE CRIMEA.—One among the many interesting objects in the British Camp before Sebastopol is the Sappers' Church on the right attack. It is built wholly of siege apparatus; but these are neither injured nor unfit for service, being only "in store," while so arranged. The articles employed in the construction have been scaling ladders, gabions, fascines, timber ready cut and shaped for gun-platforms, a few planks, and some pieces of rope. Two scaling-ladders locked into each other at the top, form the columns which separate the aisles from the body of the church, and bear the roof. The framework of the outer wall is made by long upright timbers, which lean against the summits of each set of ladders respectively, and are secured by cords. Across these a few joist beams are lashed, and the outer wall of gabions, though thicker at the base than above, in a great degree rests against these horizontal supports. To form the wall, the gabions are placed end to end, one above the other, until they reach the height of the roof. The roof is made by the platform timbers laid between the tops of the ladders on each side, and at right angles to these the fascines are laid in regular rows, until a complete covering is formed. The roof is light, admits, of course, of free ventilation, and gives a perfect protection against the direct rays of the sun. At the end opposite the entrance into this truly military church a semicircular sweep is given to the gabion wall, and in the recess thus formed several sacks stuffed with straw, and covered with the Union Jack, are arranged, to form a reading desk and kneeling cushion for the preacher.

BURSTING OF THE LOCK OF THE VICTORIA DOCKS. — The intended opening of these spacious docks, at Plaistow marshes, in August, will be delayed some months, according to the *Shipping Gazette*, in consequence of a serious accident which happened on Sunday before last, by the bursting in of the principal lock, near Bow-creek. The whole of the north side of the lock quay, with its enormous iron piles and plates, forming the wall, broke outwards with a loud report, destroying nearly every part of it; and the opposite lock wall was discovered next day to have sunk considerably, with every indication of its being thrown outwards in a similar manner to the other. The lock is, we believe, between 300 and 400 feet long, and nearly 70 feet in width. Luckily for the contractors, Messrs. Peto, the water is not yet admitted into the dock, which will enable them to remove and rebuild the lock quay wall without loss of time. Land-springs are supposed to have undermined the foundation of the wall. The contractors are removing the earthworks on each side the lock to ascertain the precise cause of the accident. The loss must be very great.

BATH STONE.—With reference to a remark quoted by us on Bath stone used at Liverpool, a Quarry-owner urges that "Bath stone would hold a lasting reputation, in any clime, provided it were properly selected, and not (as I am sorry is the case) taken from quarries where anything in the shape of blocks is found, and sent away regardless of the different beds or qualities of the stone: the consequence is, the weather acts upon it, and brings the *Bath stone* into disrepute." The matter would seem to be worth investigation. His brother quarry-owners should look into this.

NEW MARKET-HALL, HOLYHEAD, ANGLESEY.—Like most places in northern Wales, the want of accommodation for an increased and apparently increasing population has been seriously felt in Holyhead, and as one step towards making up the deficiency, the Hon. W. P. Stanley, M.P. has manifested his good wishes by erecting a spacious market-hall, for the use of the town,—the first public building erected in Holyhead. It is 134 feet in length, and 85 feet in breadth. The style is Elizabethan, the rubble work being of blue stone from Mr. Stanley's quarries, of variegated colours, the windows, cornices, &c. of Storeton stone. The centre room on the upper floor, 41 feet by 33 feet, is intended for public meetings and a general assembly-room. On the left is a reading-room and library, taken by the Holyhead Mechanics' Institute: its length is 41 feet by 24 feet, divided by folding-doors, so that when necessary, it may be thrown open for lectures, &c. On the right is another room, 41 feet by 24 feet, intended for a corn-exchange. The roof is made of open timber framework, stained in imitation of oak. The area of the market-hall is floored with Holywell flags. The roof, consisting of open timber framework, is supported by two rows of Storeton stone octagonal columns, with moulded capitals. At the top of the market is a well with a pump, for clean water; and the rain-water from the roofs is conducted into a large iron tank to be used for common purposes, such as washing vegetables, &c. The number of stalls fitted up is 56, varying in size from 11½ feet square to 9 feet by 6 feet, each of which is provided with a convenient fire-place. Mr. John Edwards was the architect; Mr. John Thomas, the builder.

APPROPRIATION OF WASTED POWER.—Will you allow me to express my conviction that much power which might readily be made available, is annually wasted upon the London Bridges? The work which, I submit, is available and wasted consists in the *vis viva* of waggons, carts, &c. descending the bridges. It is obvious that much of this could be most *advantageously* expended *in overcoming a slight obstacle*. In order to render this force valuable, I propose that the descending routes of the principal bridges be furnished with pairs of large wheels, fitted in the earth-work or masonry, each vertical, and in such position, and of such diameter, as to present an arc, not rising more than 6 inches above the surrounding surface, and presenting a chord (described by that surface) of at least 3 feet. One of each pair of wheels would be placed by the curb-stone, to catch the "near" wheels of the passing waggon, and the other a short distance from it, to meet the "off" wheel, leaving a sufficient space for the passage of the horses, and still broad enough to allow for divergence from the exact line, or difference of distance between the wheels. A waggon or cart passing over this apparatus would depress it, and would thus give motion to a hydrostatic machine, filling a tank, for the purpose of obtaining water-power,—or it might be connected with any mechanism requiring only irregular motion. This apparatus would not impede the transit of vehicles: if the weight be not sufficient to produce the piston-like motion, the very light carriages would pass over easily. Thus, by gently checking the impetus of descending traffic, a valuable piston motion might be obtained.—O. H. HODGE.

LAYING CHIEF STONE OF MODEL DWELLING-HOUSES IN WORCESTER.—Monday before last was selected by the City of Worcester Association for Building Dwellings for the Labouring Classes for the inauguration of their first adventure as an association for social improvement. The foundations of the model dwelling-houses in Cooken-street, one of the dirtiest and most disreputable localities in the city, having been laid, invitations were sent to the Mayor, Town Council, Magistrates, Chamber of Commerce, clergy, officers of militia, and most of the public bodies and public men of the city, to attend the laying of the chief stone of the building. A luncheon was provided by the association for their numerous guests in the assembly-room of the Guildhall. Large crowds of persons occupied the street, and the Militia band was stationed in the area in front of the Guildhall. The company numbered about 160. The Mayor presided on the occasion.

MR. RAWLINSON WOUNDED AT SEBASTOPOL.—We regret to learn that the chief engineer to the Crimean Sanitary Commission, Mr. Rawlinson, was accidentally wounded by a shot from the enemy while passing through a ravine near the trenches. The wound, however, is not dangerous, and the patient is going on favourably by last accounts.

THE ASYLUM FOR IDIOTS.—The National Model Asylum for Idiots, which has been in the course of erection for nearly two years, at Earlwood, near Reigate, will be opened by Prince Albert, on Tuesday, 3rd July. The building is intended to accommodate 400 pupils. There are at present about 250 cases in the institution, and the applications for admission continue to be numerous.

SALT IN WALLS.—DISINFECTANTS.—Regarding the inquiry as to the nitrification in walls, what is the original cause of the salt-formation, or what is it supposed to be? Has sea-sand been used for the mortar, &c. for wall? What is the nature of the soil upon which the wall is based? Also, is it in contact with any refuse animal or vegetable matter? If your correspondent will answer these questions, and send me, per letter, a small quantity of the salt formed, I will with great pleasure inform him of what is best to be done under the circumstances. Meantime I may as well give the process I have found quite effectual in the few instances of the kind that have come under my notice. Take 4 lbs. commercial carbonate of soda (natron), 2½ lbs. commercial carbonate of potash (pearl-ash), and 2½ lbs. of finely sifted silver sand: mix intimately, and put into a crucible (iron is best if not Hessian), capable of containing three times the quantity, and fuse for two or three hours: pour out upon a stone or iron slab, and allow it to cool; then boil in about one gallon of water, until a saturated solution is obtained. Let the salt be scraped off the wall as much as possible, and washed well with warm water; then brush the hot solution prepared as above on all parts of its surface; give the wall another coat in three days' time, and at the end of a week or two the wall will be covered with an impervious glassy coating, which will, I think, attain the desired object. If applied to damp walls, they cease to be so. It will also prevent the white rubbing off.——In reference to "the use of disinfectants in the Crimea," I quite approve of the employment of quicklime, as being better than nothing. For absorbing moisture, sulphuretted hydrogen, and removing effluvia offensive to the olfactory organs, quicklime is undoubtedly very useful; but for destroying malaria,—disinfecting, in fact, in the proper sense of the word,—chloride of lime is the only real disinfectant. Why has charcoal been so completely overlooked? It possesses the property of absorbing and condensing in its pores gases of every kind: mixed with the chloride, it greatly economises and increases its power by absorbing the nascent chlorine and giving it up again to organic matter. Is not charcoal just the thing for the Crimea?—AN ANALYTICAL CHEMIST.

BRIDGE SURVEYOR OF WEST RIDING OF YORKSHIRE.—The demise of Mr. Barnard Hartley, for many years bridge surveyor of the West Riding, has made this office vacant. Mr. Barnard Hartley, the son of the late surveyor, and who has for many years discharged the duties of the office for his father, is a candidate; so also is Mr. W. L. Moffatt, of Doncaster, architect, according to the local *Gazette*. The election is in the hands of the West Riding magistrates, and the present salary is 800*l*. per annum. On 3rd July a day will be fixed for a special meeting of magistrates, for the purpose of appointing a successor to the late surveyor.

RUINS OF OLD BATHS ON LORD PANMURE'S ESTATE IN SCOTLAND.—An interesting discovery was lately made in connection with the old castle of the Lindsays, at Edzell, near Brechin. Remains of baths are rarely to be found at old baronial buildings in Scotland; indeed, those now discovered at Edzell, are supposed to be the first that have ever been found. There had long been a tradition in the district that in addition to the many comforts enjoyed of old by the Lindsays of Edzell, they had also those of baths; but the accuracy of that idea has only now been ascertained. Little more than the foundations remain. They were attached to the south-west corner of the flower-garden. Some portions of the building are as high as 3 feet, and the foundations of the whole are quite distinct. They consist of a bath-room, dressing-room, and sitting apartment, the last of which is 16 feet square, and a lobby (entering from the flower-garden) about 16 feet long and 8 feet broad, with steps leading to the sitting-room. A narrow stair or private entrance from the lobby to the bath, and the stone pipes from the bath and the well, are in nearly as good preservation as when first erected. But for the accidental discovery of the mouth of the pipe leading from the well, the remains would have still been unknown.

THE GUTTA PERCHA COMPANY.—We have had serious statements as to gutta percha piping and the conduct of the Gutta Percha Company to plumbers, but as they affect an article of much utility, we must make some inquiries before inserting them.

THE IRON TRADE.—The collapse still continues, especially in the Staffordshire district, and there have of late been numerous failures. It is admitted that "even the most sanguine are not bold enough to think of any advance of price." The demand for iron in Lancashire and Yorkshire has improved, in consequence chiefly of a brisk start in the building trades in these districts. Beyond this, the war is, unfortunately, the best customer of the iron-masters at the present moment. A valuable discovery of ironstone, it appears, has been made at Muiravonside, in Stirlingshire.

UNCULTIVATED LAND IN FREEHOLD LAND SOCIETIES.—Unfortunately I am the possessor of some land at East Moulsey through a society; and sorry I am that I ever became such possessor, for the occupiers, or rather the proprietors, of land on either side of myself have allowed weeds to cover their land, and, in fact, in nine cases out of ten, the land is so covered a yard in height. The wind, of course, blows the seed of those weeds upon my land; so that if I weed from morning to night, trying to keep my place in order, my efforts are in vain, and my place gets overgrown with weeds from my kind slovenly neighbours' land. Cannot they let some one on the spot cultivate it for a nominal rental, and thereby turn the land to a good account? If proprietors will not see the force of this remark, it would be no more than justice that a clause should be inserted in hereafter land societies' rules, that in the case of non-cultivation within a reasonable time by the possessors, such land should be forfeited.—A WELL-WISHER TO MY NEIGHBOUR.

FIRES IN FLAX WAREHOUSES.—The alarming frequency of fires in flax warehouses at Dundee and elsewhere, is engaging the attention of the press in the north; and the *Dundee Warder* of last week has a leading article, urging the necessity of building fire-proof warehouses, and suggesting that such fires may in many cases arise from spontaneous combustion. It is a curious circumstance, that since the cholera raged in London last year, fires have been here too unusually frequent. If such fires do in many cases arise from spontaneous causes rendered more than ordinarily inflammatory by atmospheric peculiarities, it is to be hoped that the meteorological equilibrium is now re-established, and that the metropolis will neither be revisited this autumn by cholera on the one hand, nor by unusually extensive or numerous fires on the other. The deficiency of thunder about the metropolis last year was quite remarkable: we are rather reassured by the little that has already occurred in course of the present season, and we listen somewhat anxiously for more.

ELECTRO-TELEGRAPHIC PROGRESS.—The Atlantic telegraph is no longer a merely talked of project: although not yet realized, an European company, of which Mr. Brett is a prominent member, is said to have now actually entered into contracts for the completion of the work by 22nd January, 1858. The length of the wires from Ireland to Newfoundland will be some 1,750 miles: they will lie on the sandy plain which the soundings of the United States' Government have shown to stretch from land to land for the whole distance, with the exception of 200 miles next to the Irish coast, where the bottom becomes irregular and the water deeper. The actual distance is about 1,600 miles only, but it will be necessary to make a detour with the wires in order to carry them round the banks, where icebergs often ground, and where the cable might be broken by their weight and friction. The cable is to contain six wires, eight tons to the mile. Messrs. W. Kuper and Co. of London are the manufacturers. They mean to splice the ends of the portions carried to the spot in different steamers. An American company propose to form the entire American portion of the telegraph from St. John's, Newfoundland, to New York. This part of the line will be 1,200 miles in length, 71 miles of which will be under the Gulf of St. Lawrence, and the cost of the whole is estimated at a million and a half of dollars. The wires across Newfoundland will make 400 miles of the line, running through a country hitherto unoccupied and unknown. In the cutting of the path and other preparatory labours the company have had 600 men employed during the past year in that island alone. The cable to go under the Gulf of St. Lawrence has been made in this country. It contains three electric wires only, it being contemplated to lay down another of same size when the European wires have been taken across, and the business between New York and London requires it.

SARSEN STONES.—"M." asks why the Druidical sandstones in Wilts and Berks are called "sarsens?" The question itself suggests a solution. As the Saxons applied the term Saresyn to pagans, or heathen in general, and as the principal specimens of these blocks of stone were perceived to be congregated into temples popularly attributed to heathen worship, it naturally came to pass that the entire geological formation acquired the distinctive appellation of Saresyn (or heathen) stones; that is to say, after the conversion of the Saxons to Christianity. The same epithet the Saxons also applied to their invaders the Danes or Northmen, who on their coming hither were all heathen. Thus Robert Ricart (quoted in Roberts's "History of Lyme") says, "Duke Rollo le Fort was a Saresyn come out of Denmark into France." And a spot in Guernsey is still designated, I believe, the Saracen's-hill, from having constituted the temporary stronghold of certain Norman freebooters.—J. W.—*Notes and Queries.*